

# **KIRK Wireless Server 600v3 Installation and Configuration Guide**

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## International Regulatory and Product Information

	<p><b>Please find the EC Declaration of Conformity at</b> <b><a href="http://www.kirktelecom.com/company/suk273.asp">http://www.kirktelecom.com/company/suk273.asp</a></b></p>
	<p><b>The WEEE Marking on this equipment indicates that the product must not be disposed of with unsorted waste, but must be collected separately.</b></p>

### **WARNING**

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures. The above warning is inserted for regulatory reasons. If any customer believes that they have an interference problem, either because their KIRK telecom product seems to cause interference or suffers from interference, they should contact their distributor immediately. The distributor will assist with a remedy for any problems and, if necessary, will have full support from KIRK telecom.

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## Safety

**WARNING!**

Only qualified service personnel may install this equipment. The instructions in this manual are intended for use by qualified service personnel only.

***Only qualified persons should service the system.***

The installation and service of this hardware is to be performed only by service personnel having appropriate training and experience necessary to be aware of hazards to which they are exposed in performing a task and of measures to minimize the danger to themselves or other persons.

Electrical shock hazards from the telecommunication network and AC mains are possible with this equipment. To minimize risk to service personnel and users, the system must be connected to an outlet with a third-wire Earth.

Service personnel must be alert to the possibility of high leakage currents becoming available on metal system surfaces during power line fault events near network lines. These leakage currents normally safely flow to Protective Earth via the power cord. Therefore, it is mandatory that connection to an earthed outlet is performed first and removed last when cabling to the unit. Specifically, operations requiring the unit to be powered down must have the network connections (exchange lines) removed first.



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# Chapter 1 Preface

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This guide is intended for qualified technicians who will install, configure and maintain the KIRK Wireless Server 600v3 Solution. To qualify to install the KIRK Wireless Server 600v3 Solution, you must have successfully completed the KIRK Wireless Server 600v3 technical training. The guide provides all the necessary information for successful installation and maintenance of the wireless solutions.

This includes the installation and configuration of:

- KIRK Wireless Server 600v3
- KIRK Repeaters
- KIRK Handsets

The Installation Guide also provides you with information about:

- Web based Administration Page of the KIRK Wireless Server 600v3
- KIRK Configuration Tool for the KIRK Wireless Server 600v3

## 1.1 Before You Begin

This guide assumes the following:

- that users have a working knowledge of the call handlers operations
- that the call handler is installed and initialized and is working correctly
- that you have a working knowledge of deployment in general
- that a site survey has been conducted and that the installer has access to these plans

**Note:** The site survey should determine how many RF channels needed, number of handsets, user areas alternative sync ways to be used, if an alternative (Standby) Master KIRK Wireless Server 600v3 is needed, and if an LDAP Server and an alternative LDAP Server are needed.

## 1.2 Chapter Overview

<b>Where is it?</b>	<b>What is it about?</b>	<b>When to use it?</b>
Chapter 2	Introduction to KIRK Wireless Server 600v3	To learn about the different components in a typical KIRK Wireless Server 600v3 configuration.
Chapter 3	Deploying the KIRK Wireless Server 600v3	To learn how to deploy a KIRK Wireless Server 600v3 Multi-cell installation
Chapter 4	Installing the KIRK Wireless Server 600v3	To learn about KIRK Wireless Server 600v3 and to install it.
Chapter 5	KIRK Repeater Installation	To mount repeater onto wall or ceiling indoors.
Chapter 6	Preparing KIRK Handset for Use	To prepare KIRK Handsets for use, installing and charging battery.
Chapter 7	Configuring KIRK Wireless Server 600v3	To power up the KIRK Wireless Server 600v3, connect a computer to the KIRK Wireless Server 600v3, access the web based Administration Page and KIRK Configuration Tool, and configure the KIRK Wireless Server 600v3 through these programs.
Chapter 8	KIRK Handset Registration and Subscription	To register and subscribe KIRK Handsets.
Chapter 9	KIRK Handset Management	To unsubscribe and deregister KIRK Handsets. To change user configuration and adjust handsets. To activate pre call services on you handset specific for the Cisco call handler.
Chapter 10	System Management	To define and view different settings of the system, reading statistics, making a backup of configuration file, updating system software, and resetting the system.
Chapter 11	Messaging over IP MSF	To enable the MSF messages function by activating the TELNET system.
Chapter 12	Troubleshooting	To troubleshoot and to use the KIRK GWLOAD program.

## 1.3 Related Documentation

For further information about the KIRK Wireless Server 600v3 not covered by this manual, refer to the following documentation:

<i>Subject</i>	<i>Documentation</i>
Deployment Kit	DECT Deployment and Demonstration Tool User's Guide
KIRK Handset Operation	Handset User's Guide
Service News	<p>Every software release is accompanied by a Service News. The Service News describes software changes, bug fixes, outstanding issues, and hardware compatibility considerations for the new software release.</p> <p><b>Note:</b> Read the Service News before you begin a software upgrade!</p> <p>To obtain the Service News, see <a href="http://www.kirktelecom.com">www.kirktelecom.com</a></p>

## 1.4 Acronyms

AC	Authentication Code
ARI no.	Access Rights Identity - Serial number of the KWS600v3
dB	Decibels (deciBells)
DECT	Digital Enhanced Cordless Telecommunications
DHCP	Dynamic Host Configuration Protocol
e.i.r.p.	Equivalent Isotropic Radiated Power
GAP	Generic Access Profile
HW PCS	Hardware Product Change Status - Hardware edition
IP	Internet Protocol
IPEI	International Portable Equipment Identity - Serial number of the handset - SN
KWS600v3	KIRK Wireless Server 600v3
IWU	Inter Working Unit
LAN	Local Area Network
LDAP	Lightweight Directory Access Protocol
LED	Light Emitting Diode

KWS	KIRK Wireless Server
MAC	Media Access Control - hardware address of a device connected to a network
PB	Print circuit board
PBA	Print circuit board assembly
PBX	Private Branch eXchange
PCS	Product Change Status (Edition)
PIE	Production Initial Edition
PoE	Power over Ethernet
PP	Portable Parts - wireless handset
RSSI	Received Signal Strength Indicator
RTP	Real Time Protocol
SW PCS	Software Product Change Status - Software edition
TFTP	Trivial File Transfer Protocol
TOS	Type of Service
VoIP	Voice over Internet Protocol
WLAN	Wireless Local Area Network
WRFP	Wireless Radio Fixed Part - Wireless Repeater

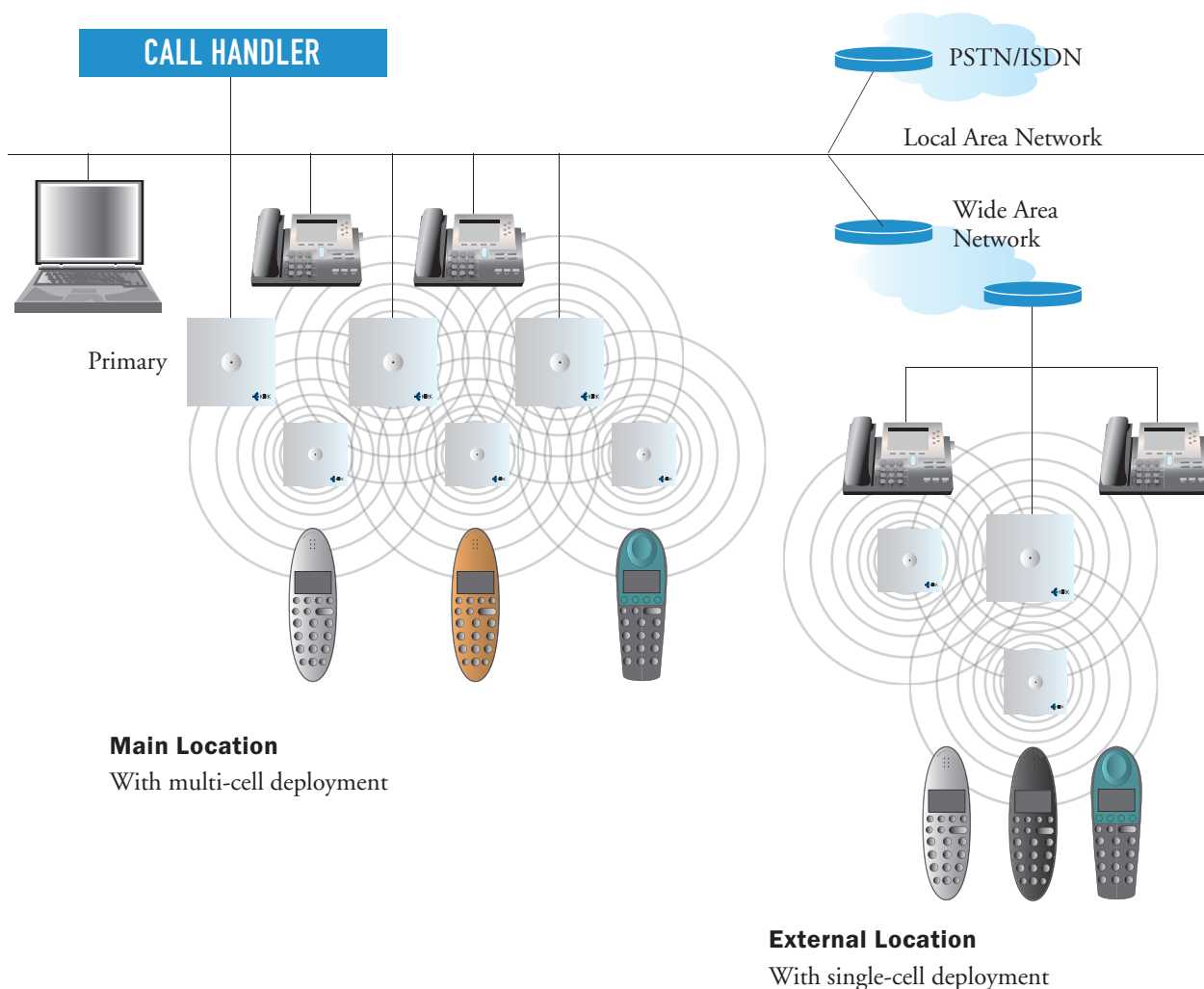
## Chapter 2 Introduction to KIRK Wireless Server 600v3

A KIRK solution offers a range of possibilities, each of them representing a way to put together a telephony solution to suit your requirements. For vertical markets ranging from retail, hospitality and healthcare segments to manufacturing and heavy industry, KIRK telecom provides small, medium and large businesses with range of wireless products and services, across analogue, ISDN and IP interface technology.

A typical KIRK Wireless Server 600v3 configuration includes a number of the following components, in addition to the KIRK Wireless Server 600v3:

- KIRK Repeaters
- KIRK Handsets and accessories

**Figure 1** Overview of the Whole Solution



This section provides information about:

- [“Components of the KIRK Wireless Server 600v3 Solution” on page 22](#)
- [“Requirements for the KIRK Wireless Server 600v3 Solution” on page 25](#)

## 2.1 Components of the KIRK Wireless Server 600v3 Solution

This section provides information about:

- [“KIRK Wireless Server 600v3” on page 22](#)
- [“Wireless Bands” on page 23](#)
- [“KIRK Repeater” on page 24](#)
- [“KIRK Handset” on page 24](#)
- [“KIRK Maintenance Software” on page 25](#)

### 2.1.1 KIRK Wireless Server 600v3

With the KIRK Wireless Server 600v3 solution, you are always assured the very best quality as well as an array of telephony benefits:

- Exceptional voice quality
- High security based on DECT standard
- Support for KIRK Repeaters to expand the radio coverage area
- Seamless handover between KIRK Wireless Server 600v3 and KIRK Repeaters to assure uninterrupted calls
- Automatic log-in of KIRK Handsets between installations – a feature which is especially relevant for customers with multiple locations
- KIRK SIO Application Interface for third party applications – adding messaging to mobility

As the KIRK Wireless Server 600v3 is a scalable solution capable of registering up to 1500 wireless users it is evidently an excellent choice for small, medium-sized as well as large businesses within a wide range of vertical markets. With the option of deploying the KIRK Wireless Server 600v3 as either a single-cell or a multi-cell solution, it can be adjusted to fit the exact needs of the individual customer. The IP interface to the PBX makes it an ideal solution for businesses with several locations. A multi-site solution can be customized with a number of single-cell and multi-cell deployments depending on the size of each individual location. When there is a need for more than 35 users at a location, a second or more KIRK Wireless Server 600v3 (called KIRK Wireless Server 600v3 secondaries) need to be installed. To create a multi-cell solution a multi-cell license is needed. Up to 256 radio units (a mix of primary and secondary KIRK Wireless Server 600v3 and KIRK Repeaters) can be applied to obtain the necessary radio coverage. A single-cell version consists of one KIRK Wireless Server 600v3 and up to 6 KIRK Repeaters.

**Table 1** Overview of System Capacity

Description	Capacity
Min. number of KIRK Wireless Server 600v3 Single-cell	1
Max. number of KIRK Wireless Server 600v3 Multi-cell	256
Max. number of KIRK Repeaters on KIRK Wireless Server 600v3 Single-cell	6
Max. number of KIRK Repeaters on KIRK Wireless Server 600v3 Multi-cell	1,2 or 3
Max. number of KIRK Repeaters in a whole system	256 (minus number of KIRK Wireless Server primaries and secondaries)
Max. number of simultaneous calls (Single-cell)	12
Max. number of simultaneous calls (Multi-cell)	11
Max. number of registered KIRK Handsets (Single-cell)	35
Max. number of registered KIRK Handsets (Multi-cell)	1500

The KIRK Wireless Server 600v3 controls the wireless infrastructure. It manages the KIRK Repeaters and the IP interface to the call handler, as well as functionalities such as synchronization of seamless handover, echo cancellation, line delay compensation etc.

The communication protocol between the KIRK Wireless Server 600v3 and the call handler can be either:

- SKINNY
- H323
- SIP

A KIRK Wireless Server 600v3 is installed directly on the LAN and must be managed as part of the corporate network.

For more information about the KIRK Wireless Server 600v3, refer to [“Deploying KIRK Wireless Server 600v3”](#) on page 29, [“Installing the KIRK Wireless Server 600v3”](#) on page 39 and [“Configuring KIRK Wireless Server 600v3”](#) on page 73.

## 2.1.2 Wireless Bands

The KIRK solution supports two wireless bands, allowing operation in various countries and regions. Supported wireless bands are:

- ETSI DECT (1880-1900 Mhz), referred to as DECT
- USA DECT (1920-1930 Mhz), referred to as 1G9

The wireless band used by a KIRK Wireless Server 600v3 is determined by the KIRK Wireless Server 600v3 and KIRK Handsets ordered with the solution.

### 2.1.3 KIRK Repeater

The KIRK Repeater can be used to extend the coverage area in a KIRK solution. The wireless KIRK Repeater is used in areas with limited voice traffic, where cabling is difficult. The KIRK Repeater does not increase the number of traffic channels, but increases the coverage area established with the KIRK Wireless Server 600v3. Up to three KIRK Repeaters can be placed in cascade formation directing coverage in a certain direction.

The KIRK Wireless Server 600v3 can support up to 6 KIRK Repeaters in a single-cell solution and up to 256 radio units (a mix of primary and secondary KIRK Wireless Server 600v3 and KIRK Repeaters) in a multi-cell solution.

For more information about the KIRK Repeater, refer to [“KIRK Repeater Installation”](#) on page 47.

### 2.1.4 KIRK Handset

The KIRK Handset is a lightweight, ergonomically designed wireless unit that includes an LCD display and keypad.

The KIRK Handset is a portable unit compatible with DECT GAP standard.

The KIRK Handset is designed to provide the subscriber with most of the features available for a wired phone, in addition to its roaming and handover capabilities.

The KIRK Wireless Server 600v3 supports up to 35 registered handsets in a single-cell solution and up to 1500 registered handsets in a multi-cell solution.

For more information about the KIRK Handset, refer to [“Preparing KIRK Handset for Use”](#) on page 63, [“KIRK Handset Registration and Subscription”](#) on page 155 and [“KIRK Handset Management”](#) on page 165.

#### 2.1.4.1 Auto Login and Handover

*Auto login* refers to the ability to log on to more than one system, enabling you to use the same handset on up to 10 different systems. If a handset is subscribed to two or more systems, you can use Auto Login type A or Auto Login type B to change between the systems automatically.

*Handover* refers to the ability to move between the coverage areas of different radio units (mix of primary and secondary KIRK Wireless Server 600v3 and KIRK Repeaters) on the same system while talking, without interruptions in the conversation.

### 2.1.5 KIRK SIO Application Interface

The KIRK SIO Application Interface is a communicational platform allowing text messaging between the KIRK Wireless Server and a KIRK Handset. With the KIRK SIO API, which is a fundamental part of all KIRK solutions, and a third party application program, the customer is offered a wide range of usage opportunities in a variety of vertical markets.



### 2.1.6 KIRK Maintenance Software

KIRK telecom provides the following software applications for the installation and maintenance of the KIRK Wireless Server 600v3:

- Web based Administration Page  
Used for programming of the KIRK Wireless Server 600v3 and registration of KIRK Handsets.
- KIRK Configuration Tool  
Used for programming of the KIRK Wireless Server 600v3.
- ServiceTool  
Used for programming of the KIRK Repeater, adjustment of the KIRK Handset and software download to KIRK Repeater/KIRK Handset.  
The ServiceTool application can be downloaded from [www.telecom.com](http://www.telecom.com).

## 2.2 Requirements for the KIRK Wireless Server 600v3 Solution

This section provides information about the environmental and electrical requirements and software requirements for the KIRK Wireless Server 600v3 solution.

### 2.2.1 KIRK Wireless Server 600v3

#### 2.2.1.1 Environmental Requirements

The following is a list of recommendations for suitable installation conditions:

- Verify that the installation area is clean, dry, and protected from weather extremes.
- Verify that the floor of the installation area is finished with linoleum, vinyl, ceramic, wooden flooring, computer floor tiles, or polished sealed concrete. Carpeting is not recommended.
- Verify that the ceiling of the installation area is finished or treated to prevent particle discharge.
- Verify that the installation area is well lit, and that the light source is uniformly diffused without shadows. Adequate lighting should provide a comfortable reading level and allow the identification of wire insulator colors without undue eye fatigue. Lighting should be comparable to an office work environment, with a minimum level of 70 foot-candles at each work surface. As a general rule, in a room with a 2.5m ceiling, one 1.2m fluorescent tube provides sufficient illumination for 1.9-2.4 sq m .

- Verify that ventilation of the installation area is capable of maintaining an ambient temperature of 0-40° C, and a relative humidity of 20-80% non-condensing, while the system is operating. The maximum power rating of a KIRK Wireless Server 600v3 under full load should not exceed 315W/1070 BTU/Hr. These figures are for each cabinet only, and do not take into account heat generated by other equipment. In particular, charging fully-discharged batteries may generate a considerable amount of heat, depending on battery capacity and rate of charge. Refer to the equipment manufacturer data for more information.
- Minimum distance between two KIRK Wireless Server 600v3 varies depending on material and construction of buildings, but there must always be synchronization chains and radio coverage overlap between the two KIRK Wireless Server 600v3 and handover between handsets. The time it takes a person to cross the common coverage area must be 10 seconds or more, as the handset needs time to scan for an alternative KIRK Wireless Server 600v3.
- Verify that the installation area is free of caustic or corrosive liquids, substances, or materials. If batteries will be installed as part of the system, ensure that adequate precautions are taken (such as special ventilation) to prevent corrosive emissions from the batteries. Check local building codes for additional requirements.
- Verify that the installation area is located no closer than 6.1m from electric devices that produce large electro-magnetic fields (EMF) or high levels of radio frequency energy. Possible EMF sources are radio transmitters, electric arc welding machines, copying machines, electric motors, refrigeration units, power transformers, electric load centers, and main circuit breaker panels.
- Verify that the electrical service is sufficient and located in close proximity to the KIRK Wireless Server 600v3.
- It is required that one (1) dedicated branch circuit which must be independently protected by a fuse or a circuit breaker, and must not be controlled by a switch. Type-C fuses should be used where required by local authorities.

### *2.2.1.2 Electrical Requirements*

The following electrical requirements must be met:

- Mains of LAN (802.3af)
- Power consumption: 24V/130-220mA (standby 180 mA)
- Typical power consumption: 7W
- The max. radiated output power for the antenna is 10mW e.i.r.p/channel.

## 2.2.2 KIRK Repeater

### 2.2.2.1 Environmental Requirements

- Avoid installing repeaters on large concrete or marble columns because these columns affect radio coverage. If possible, place the repeater a minimum of one meter from these types of columns.
- Do not install a repeater with the antenna housings near metal objects. Be careful not to damage existing wiring or panels.
- Do not position repeaters in ducts, plenums, or hollow spaces used to transport environmental air except where the duct, plenum or hollow space is created by a suspended ceiling having lay-in panels. When you need more than one repeater in a cell to meet traffic requirements, position the repeaters at the same cell center.
- Keep the repeater away from steel constructions.
- Do not position repeaters directly on metallic surfaces. If possible, place the repeater a minimum of one meter from these types of surfaces.
- Do not position repeaters behind furniture.
- Only position repeaters where the signal is needed.
- The external antenna used for the transmitter is to be fixed-mounted on indoor permanent structures providing a separation distance of at least 20 cm from all persons during normal operation and must not be co-located or operating in conjunction with any other antenna or transmitter. The external antenna can be placed a maximum of one meter from the repeater and must be placed in the direction of the KIRK Wireless Server 600v3 that the repeater should synchronize with. If the external antenna and repeater is part of a repeater jump, the antenna should be directed towards the repeater to be synchronized with.
- The installation area must be clean, free of traffic and excess dust, dry, and well ventilated.
- The installation area must be within the temperature ranges of 10°C and 40°C.
- The installation area must be between 20% and 80% non-condensing relative humidity.
- Minimum distance between two repeaters varies depending on material and construction of buildings, but there must always be synchronization chains and radio coverage overlap between the two repeaters and handover between handsets. The time it takes a person to cross the common coverage area must be 10 seconds or more, as the handset needs time to scan for an alternative repeater.

### 2.2.2.2 Electrical Requirements

The following electrical requirements must be met:

- The max. radiated output power for the antenna is 10W e.i.r.p/channel.
- The supplied power for the charger must be 110 V to 120 V ac nominal (or 220 V to 230 V ac nominal), 50/60 Hz.

## 2.2.3 KIRK Handsets

### 2.2.3.1 Environmental Requirements

- The area where the KIRK Handset is used must be within the temperature ranges of 10°C and 40°C.
- For correct battery charging, the room temperature must be between 0°C and 25°C. Therefore, the handset must not be placed in direct sunlight. The battery has a built-in heat sensor which will stop charging if the battery temperature is too high.
- For battery information, refer to [“Installing Battery” on page 65](#).
- The area where the KIRK Handset is used must be between 20% and 80% non-condensing relative humidity.

### 2.2.3.2 Electrical Requirements

The following electrical requirement must be met:

- The supplied power for the charger must be 110 V to 120 V ac nominal (or 220 V to 230 V ac nominal), 50/60 Hz.

## 2.2.4 KIRK Maintenance Software

This section describes the computer requirements to run the installation and maintenance tools of the KIRK Wireless Server 600v3.

### 2.2.4.1 Software Requirements

- OS: Windows 2000 (SP4), Windows XP (SP2), Windows Vista (for the web based Administration Page of the KIRK Wireless Server 600v3, OS can also be: Linux, Macintosh)
- CPU: Minimum 400MHz (2000/XP), 1GHz (Vista)
- RAM: Minimum 256 MB (2000/XP), 1 GB (Vista)
- GPU/Display: XGA (1024x768)
- Harddisk: Minimum recommended harddisk size by OS and other installed applications + 25 MB free space for the application.

**Note:** Depending on other applications running on the system, CPU, RAM and harddisk may vary.

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## Chapter 3 Deploying KIRK Wireless Server 600v3

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Before you install the KIRK Wireless Server 600v3 solution, it is necessary to perform a complete site survey and determine the exact location of KIRK Wireless Server 600v3 primaries and secondaries and number of handsets required.

A well planned installation should start with an RF coverage site survey. A site survey is designed to determine the optimal location for KIRK Wireless Server 600v3 and KIRK Repeaters and the amount of wireless voice traffic to be supported by the installation (i.e., how many KIRK Handsets must maintain voice conversations at the same time, in any given area).

Due to the unexpected nature of RF propagation in an indoor environment, an actual on-site test must be performed before the installation is complete. While an extensive guide to effective RF coverage planning is outside the scope of this manual, the following points should be taken into consideration when planning the site, prior to Wireless Server 600v3 and KIRK Repeater installation:

- The KIRK Wireless Server 600v3/KIRK Repeater provides typical RF coverage of up to 50 meters in a typical indoor office environment and up to 300 meters in an open area (line-of-site), extending in all directions from the KIRK Wireless Server 600v3/KIRK Repeater. The exact coverage range depends on the building architecture, wall material and surroundings.
- The KIRK solution can support a maximum of 1500 handsets.
- The KIRK solution supports a maximum of 256 radio units (a mix of primary and secondary KIRK Wireless Server 600v3 and KIRK Repeaters).
- Handset handover: KIRK Handsets can move between coverage areas of primary and secondary KIRK Wireless Server 600v3 and KIRK Repeaters while receiving continuous service and maintaining conversations in progress.
- For efficient handover of conversations between KIRK Wireless Server 600v3 primaries and secondaries, deploy KIRK Wireless Server 600v3 with wide **overlap** between them (i.e., plan for some areas to be covered by more than one KIRK Wireless Server 600v3). Overlaps are necessary to maintain seamless handover and to establish synchronization chains. A good example may be a cafeteria during lunch hour where temporary concentrations of handsets may occur. The overlap carries the excess call load to adjacent KIRK Wireless Server 600v3 to provide uninterrupted services to subscribers.
- Typically, installations such as office buildings, hotels and hospitals should be equipped with KIRK Wireless Server 600v3/KIRK Repeaters on several floors to create uniform and complete RF coverage.
- Open areas can be covered with a sparse network of KIRK Wireless Server 600v3. In such applications, the KIRK Wireless Server 600v3/repeaters cover an extended range due to the extended line-of-sight RF propagation capability.
- Ensure that there is not a residentially DECT system (home DECT) on the site.

This section provides information about:

- [“Recommendations for KIRK Wireless Server 600v3/ KIRK Repeater Placement” on page 30](#)
- [“Deployment of a KIRK Wireless Server 600v3 Multi-Cell” on page 31](#)

### **3.1 Recommendations for KIRK Wireless Server 600v3/ KIRK Repeater Placement**

- In large halls, the KIRK Wireless Server 600v3/KIRK Repeater should be installed vertically in the middle of the space below the drop ceiling.
- In corridors, the KIRK Wireless Server 600v3/KIRK Repeater should be installed vertically preferably at corridor intersections where propagation patterns follow the corridor patterns. The KIRK Wireless Server 600v3/KIRK Repeater should point towards the corridor and preferably in the middle height between the floor and the actual ceiling. In case there are high objects in the area, the KIRK Wireless Server 600v3 should be installed above those objects but still kept distant from the ceiling.
- In multi-story buildings, KIRK Wireless Server 600v3/KIRK Repeaters may be installed on opposite sides of the floors to take advantage of the floor-to-floor coverage. The coverage design cannot rely entirely on floor-to-floor propagation; each case must be verified due to variations in local attenuation patterns.
- If the building contains a central open space area with windows to the other areas, KIRK Wireless Server 600v3/KIRK Repeaters may be installed in this open space to provide a good coverage for the rooms in the inner circle on all floors (e.g. hotels).
- If a KIRK Wireless Server 600v3/KIRK Repeater hangs vertically on a wall, the RF coverage in front of the KIRK Wireless Server 600v3/KIRK Repeaters is twice as large as the coverage at the rear. When a KIRK Wireless Server 600v3/KIRK Repeater is installed on the outside of an outer wall, the RF coverage behind it is strongly attenuated by the wall.
- KIRK Wireless Server 600v3/KIRK Repeaters should not be installed near large metallic objects.
- Reinforced concrete structures have a high attenuation factor inside the building. They decrease the RF coverage range of the KIRK Wireless Server 600v3/KIRK Repeaters and therefore requires a higher number of KIRK Wireless Server 600v3/KIRK Repeaters in the building. Lighter types of construction require fewer base stations since attenuation figures are considerably lower.

## 3.2 Deployment of a KIRK Wireless Server 600v3 Multi-Cell

**Note:** This section only contains deployment information specific to the KIRK Wireless Server 600v3. For more information about deployment in general, refer to the DECT Deployment and Demonstration Tool User Guide accompanying the Deployment Kit. The DECT Deployment and Demonstration Tool User Guide provides instructions on how to use the Deployment Kit to determine the most suitable locations for the different radio units.

### 3.2.1 Sync over Air/

As a user moves from one KIRK Wireless Server 600v3 radio coverage area to another, the call must be handed over to the next radio unit. To create handover between radio units it is necessary to establish synchronization chains. For more information about synchronization chains, refer to [“Examples of Synchronization Chains” on page 31](#). If the synchronization between radio units is lost, then handover is not possible and ongoing calls will be terminated.

**Note:** Each KIRK Wireless Server 600v3 must be placed within the radio coverage area of at least one other KIRK Wireless Server 600v3 or KIRK Repeater (radio units).

### 3.2.2 Examples of Synchronization Chains

Certain rules must be taken into consideration when establishing synchronazation chains:

- The distance over which synchronization can take place is limited to a distance similar to a loss of max. 25dB. If the loss of signal is higher than 25dB, there is no guarantee, that synchronization is stable.

**Note:** It is recommended that a KIRK Wireless Server 600v3 synchronizes with at least two other radio units, that an alternative sync way is defined to ensure system redundancy. If the primary sync way is not working, then the alternative sync way takes over and the synchronization chain is not broken.

**Note:** Synchronization chains for the KIRK Wireless Server 600v3 Solution can be made with Primary and Secondary KIRK Wireless Server 600v3 and KIRK Repeaters.

**Note:** As you can only configure a KIRK Repeater to synchronize on one radio ID, it is not possible to define alternative sync ways for repeaters.

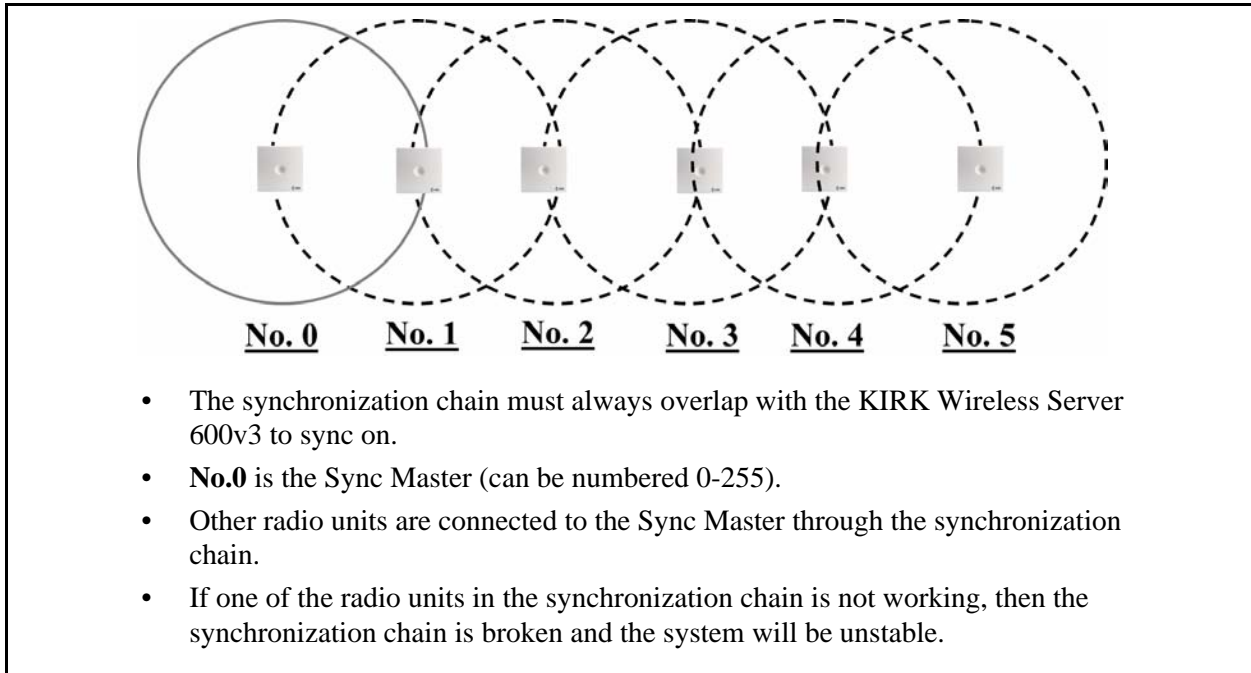
As the KIRK Wireless Server 600v3 uses the DECT interface to synchronize on, one KIRK Wireless Server 600v3 is configured as the Sync Master.

This section provides information about:

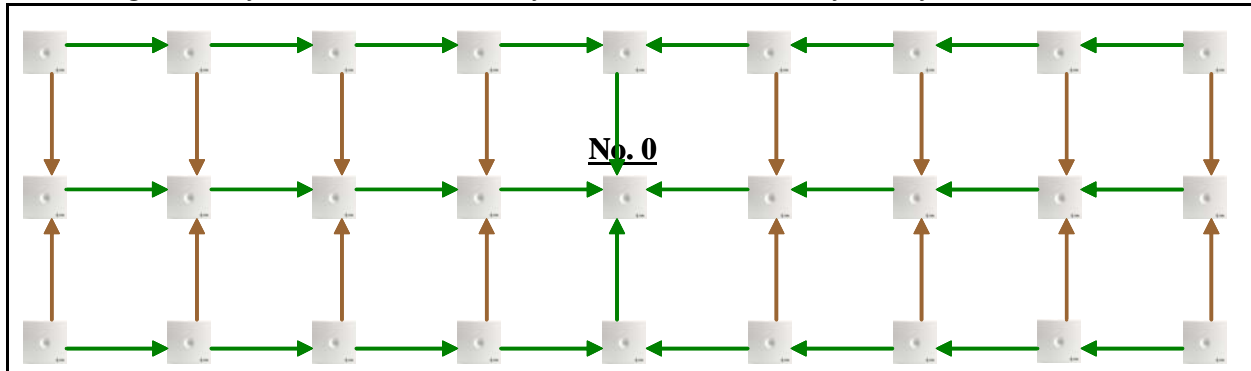
- “Synchronization Chain With One Sync Master (Primary Sync Ways)” on page 32
- “Synchronization Chain With Alternative Sync Ways” on page 34
- “Synchronization Chain With and Without Alternative Sync Ways” on page 37

### 3.2.2.1 Synchronization Chain With One Sync Master (Primary Sync Ways)

**Figure 2** Synchronization Chain





**Figure 3** Synchronization Chain Layout without Alternative Sync Ways

- **No. 0** is the Sync Master (can be numbered 0-255).

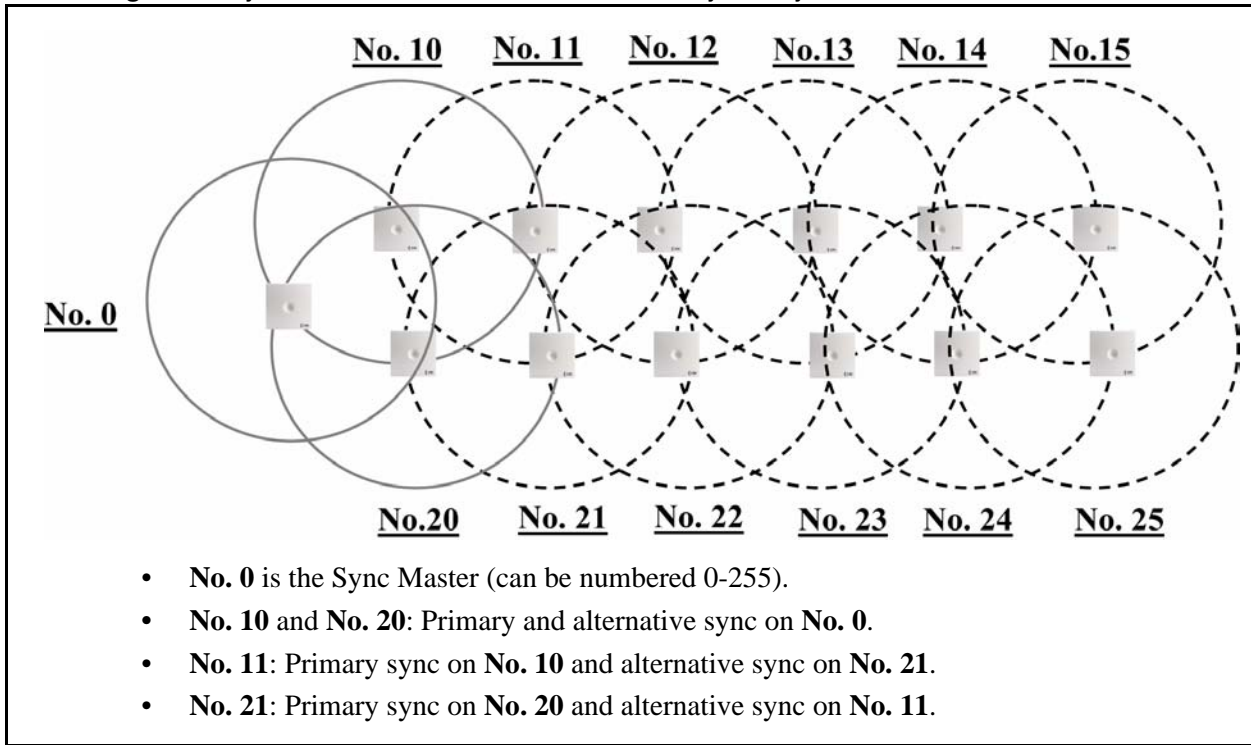
**Note:** It is recommended to place the Sync Master in the middle of the building.

- **Green line:** Shows the primary sync ways.
- **Braun line:** Only handover overlap is needed.

**Note:** It is recommended to make a site planner! Every KIRK Wireless Server 600v3 must be numbered with **Radio ID**, **Primary sync Radio ID**, and **Alternative sync Radio ID**.

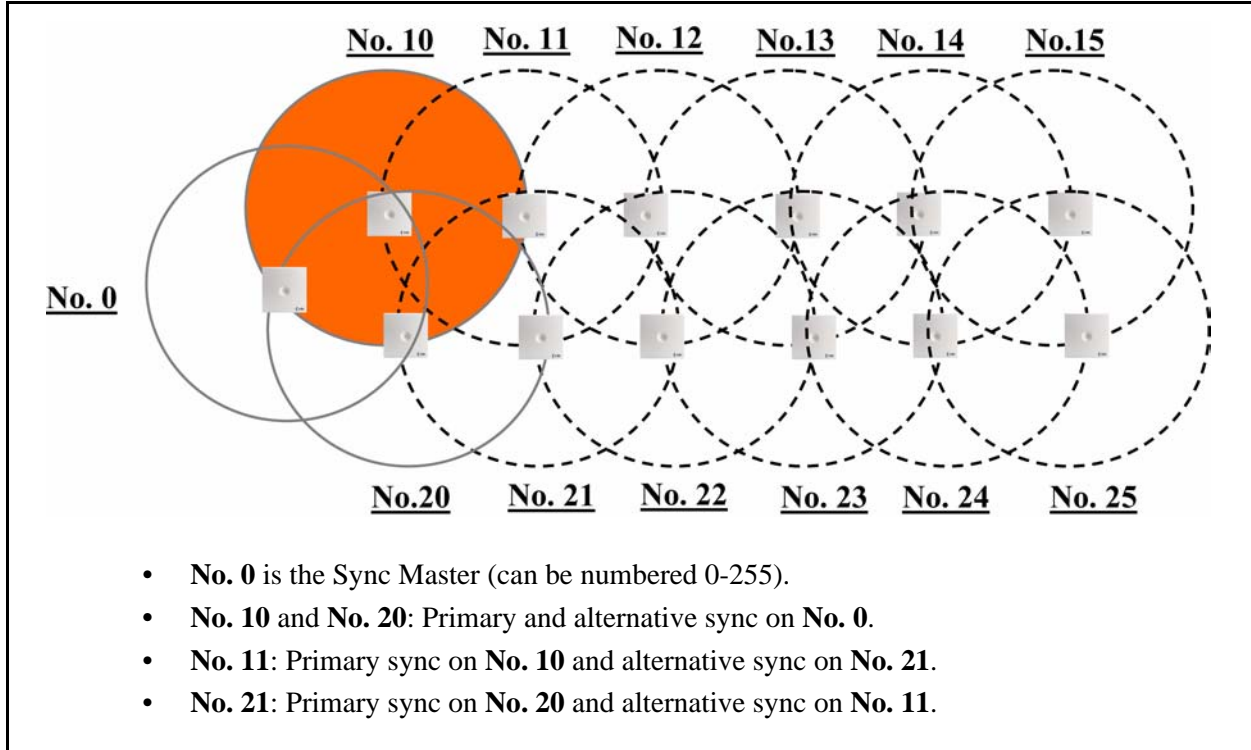
### 3.2.2.2 Synchronization Chain With Alternative Sync Ways

**Figure 4** Synchronization Chain with Alternative Sync Ways

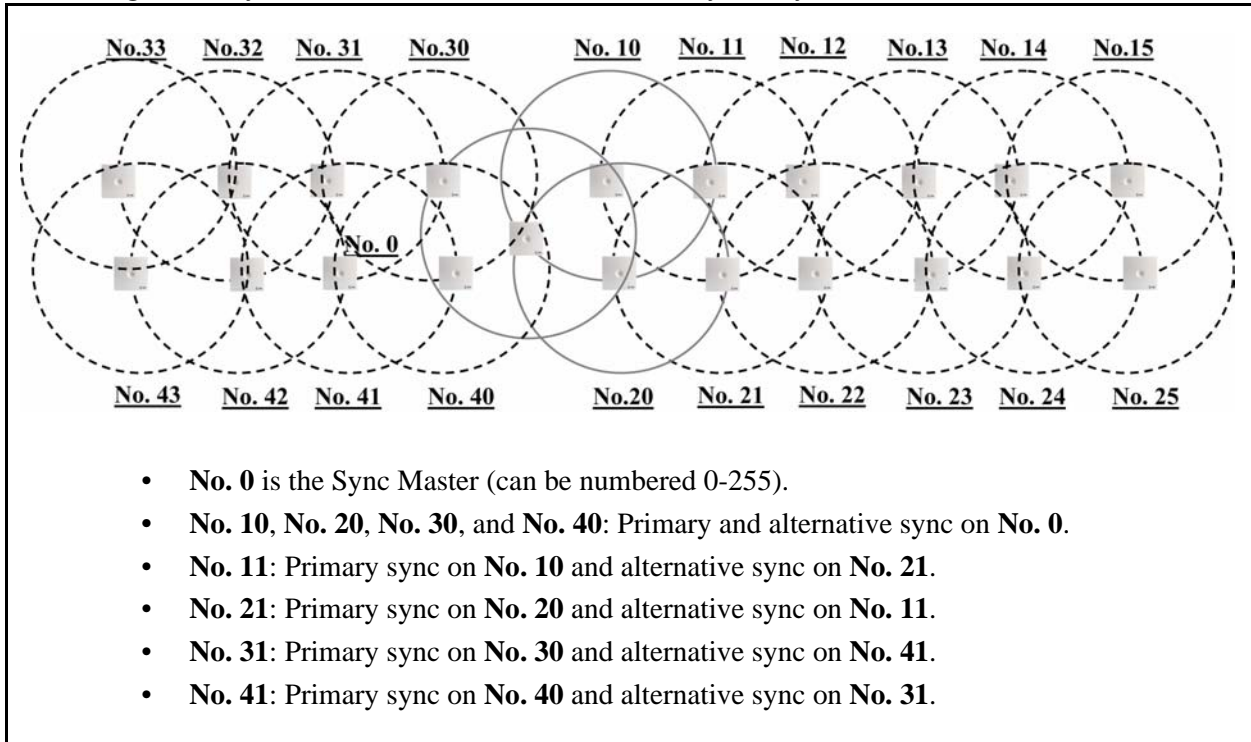


In the example below (Figure 5 on page 35), KIRK Wireless Server 600v3 **No. 10** is down. As a consequence, KIRK Wireless Server 600v3 **No. 11** must use the alternative sync way on **No. 21**.

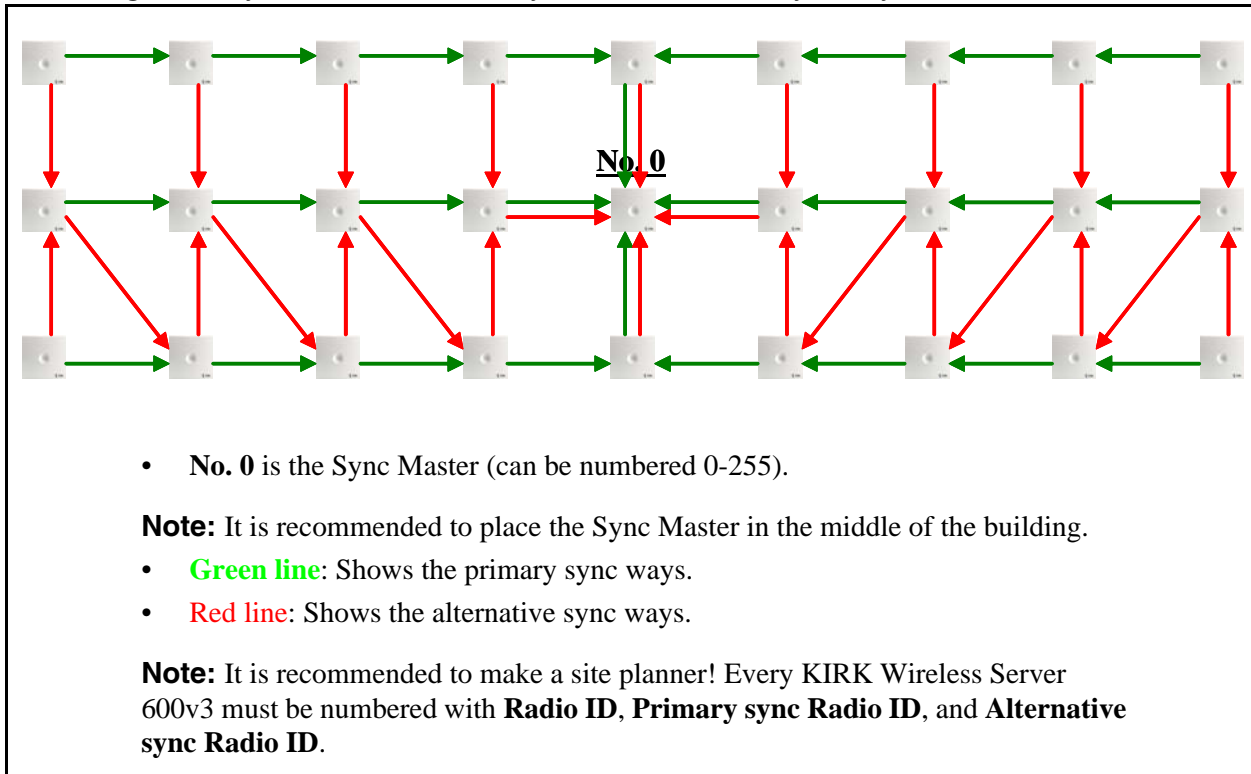
**Figure 5** Synchronization Chain with Alternative Sync Ways



**Figure 6** Synchronization Chain with Alternative Sync Ways

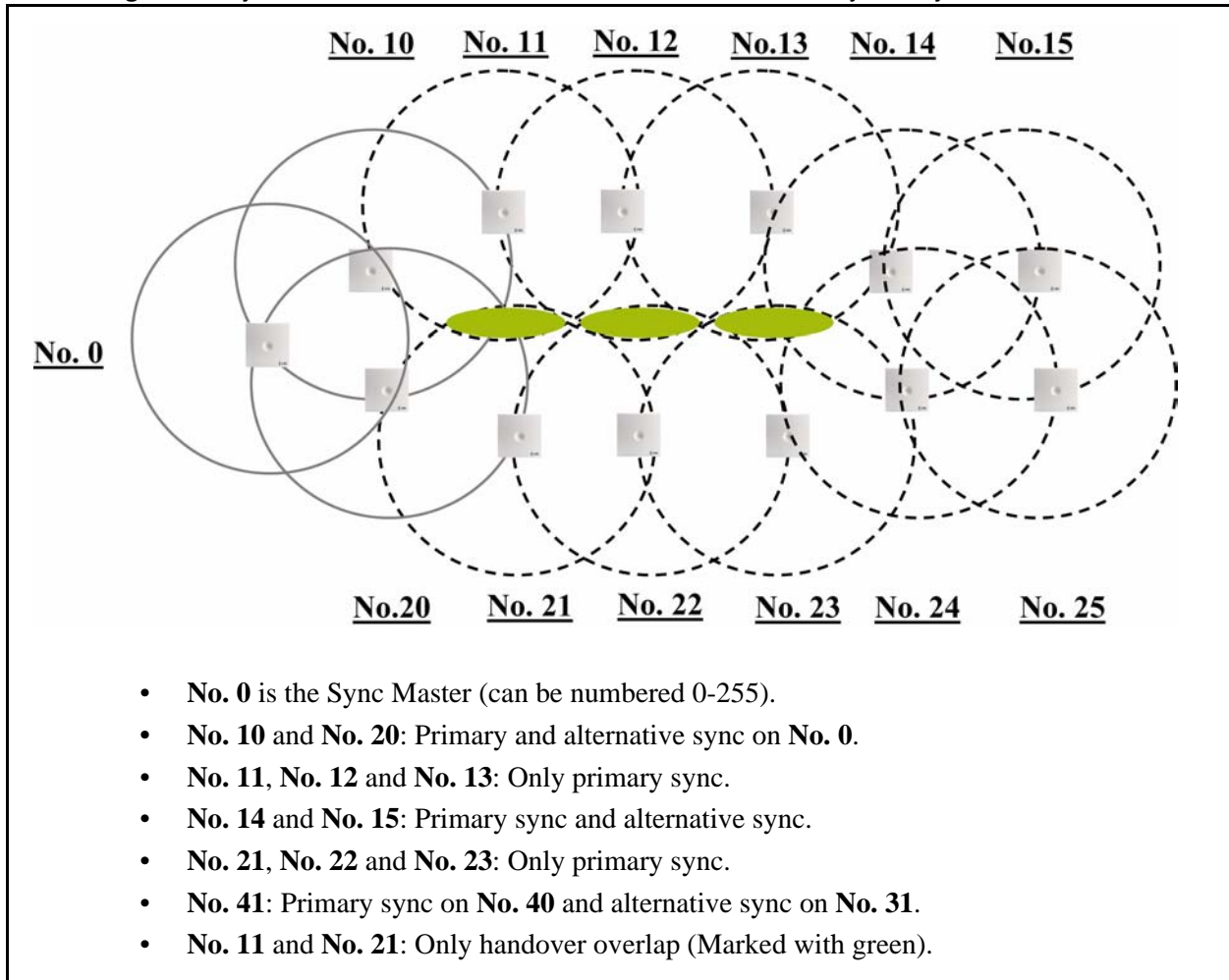


**Figure 7** Synchronization Chain Layout with Alternative Sync Ways

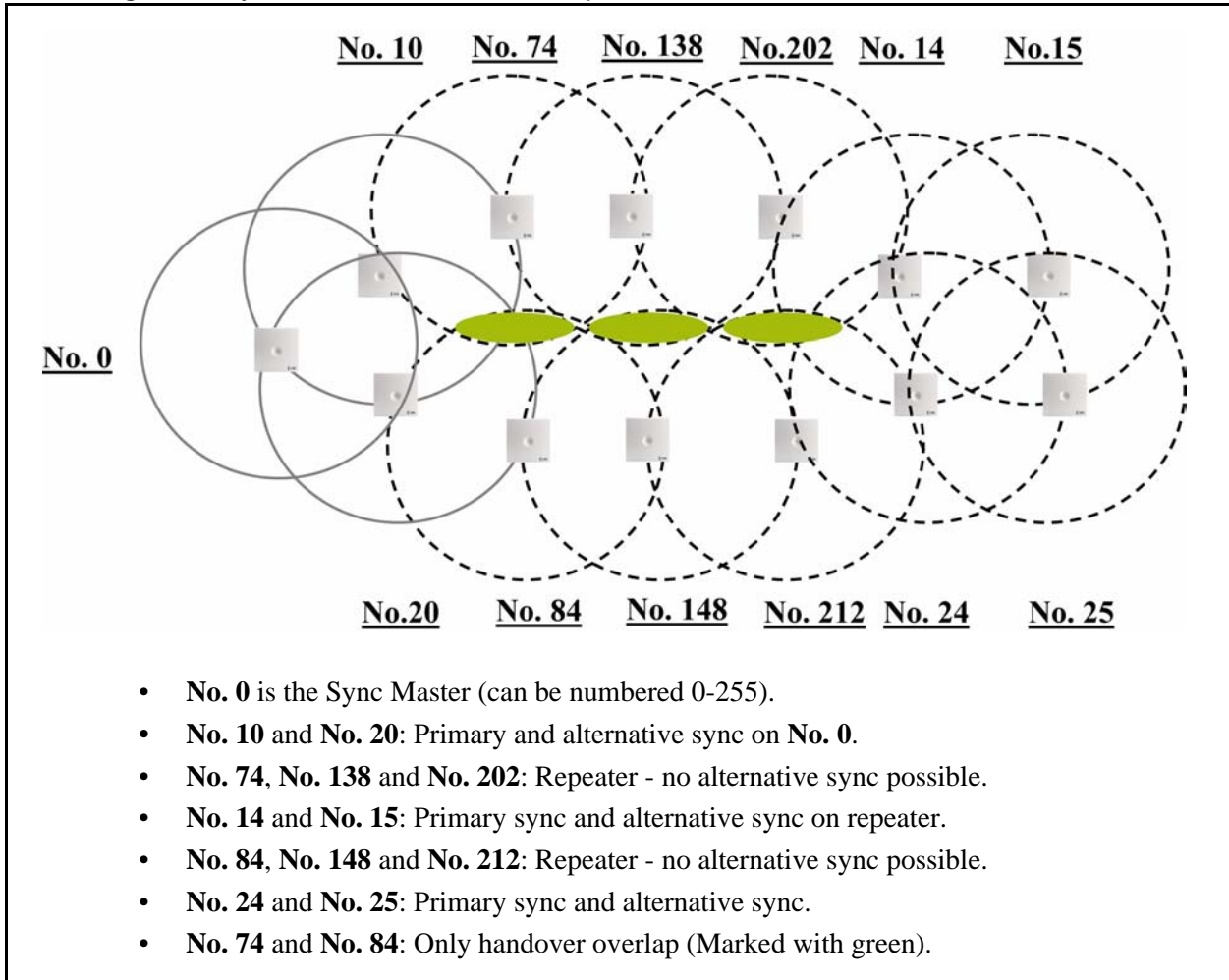


### 3.2.2.3 Synchronization Chain With and Without Alternative Sync Ways

**Figure 8** Synchronization Chain With and Without Alternative Sync Ways



**Figure 9** Synchronization Chain With Repeaters



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## Chapter 4 Installing the KIRK Wireless Server 600v3

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This section provides a description of the KIRK Wireless Server 600v3 and describes how to unpack and install it. The section also provides information about resetting the KIRK Wireless Server 600v3 hardware using the Reset button on the KIRK Wireless Server 600v3 faceplate.

Before you install the equipment, ensure that a site planner defines the locations of the KIRK Wireless Server.

This section contains the following information:

- [“Unpacking” on page 39](#)
- [“Description of KIRK Wireless Server 600v3” on page 40](#)
- [“Installing the KIRK Wireless Server 600v3” on page 45](#)
- [“Recording the Installation Information” on page 46](#)

### 4.1 Unpacking

#### 4.1.1 Inspect for Damage

- 1 Inspect the shipping carton for evidence of physical damage or mishandling prior to opening.
- 2 Inspect all parts for damage.
- 3 Report any damage to the carrier immediately.
- 4 If it is necessary to make a damage claim for the carrier, do not move the shipping carton until it has been examined by a representative of the carrier.
- 5 Dispose of empty cartons in accordance with local regulations.

#### 4.1.2 Unpacking the Shipping Container

For indoor installations, the following items should be present in every box containing a KIRK Wireless Server 600v3:

- KIRK Wireless Server 600v3
- Two mounting screws and anchors

## 4.2 Description of KIRK Wireless Server 600v3

This section contains information about:

- [“KIRK Wireless Server 600v3 Provides RF Channels to KIRK Handsets”](#) on page 40
- [“KIRK Wireless Server 600v3 Types and Catalog Numbers”](#) on page 40
- [“KIRK Wireless Server 600v3 Appearance and Components”](#) on page 41
- [“KIRK Wireless Server 600v3 LED Indicators”](#) on page 43
- [“KIRK Wireless Server 600v3 - Reset Button”](#) on page 44

### 4.2.1 KIRK Wireless Server 600v3 Provides RF Channels to KIRK Handsets

The KIRK Wireless Server 600v3 supports 12 RF channels simultaneously for DECT or USA DECT bands.

The RF communication is provided according to the band standard at the site:

- KIRK Wireless Server 600v3 provides 12 RF channels of 1.88 GHz, DECT standard, used in Europe, Australia and South America.
- KIRK Wireless Server 600v3 provides 12 RF channels of the 1.9 GHz, USA DECT standard, used in North America.

### 4.2.2 KIRK Wireless Server 600v3 Types and Catalog Numbers

The KIRK Wireless Server 600v3 contains RF circuitry that comply with the local band standards: ETSI DECT and USA DECT 6.0. The table below includes a list of available KIRK Wireless Server 600v3 and their catalog numbers.

**Table 2** KIRK Wireless Server 600v3 Catalog Numbers

<i>Variants of KIRK Wireless Server 600v3</i>	<i>Part Number</i>
KIRK Wireless Server 600v3 1.8 GHz (conforms with standard DECT markets) <ul style="list-style-type: none"><li>• with Skinny Protocol</li><li>• with H323 Protocol</li><li>• with SIP Protocol</li></ul>	02363300 02363301 02363301
KIRK Wireless Server 600v3 1.9 GHz (for North America) <ul style="list-style-type: none"><li>• with H323 Protocol</li><li>• with SIP Protocol</li></ul>	02338501 02338501



### 4.2.3 KIRK Wireless Server 600v3 Appearance and Components

The KIRK Wireless Server 600v3 front cover includes the following:

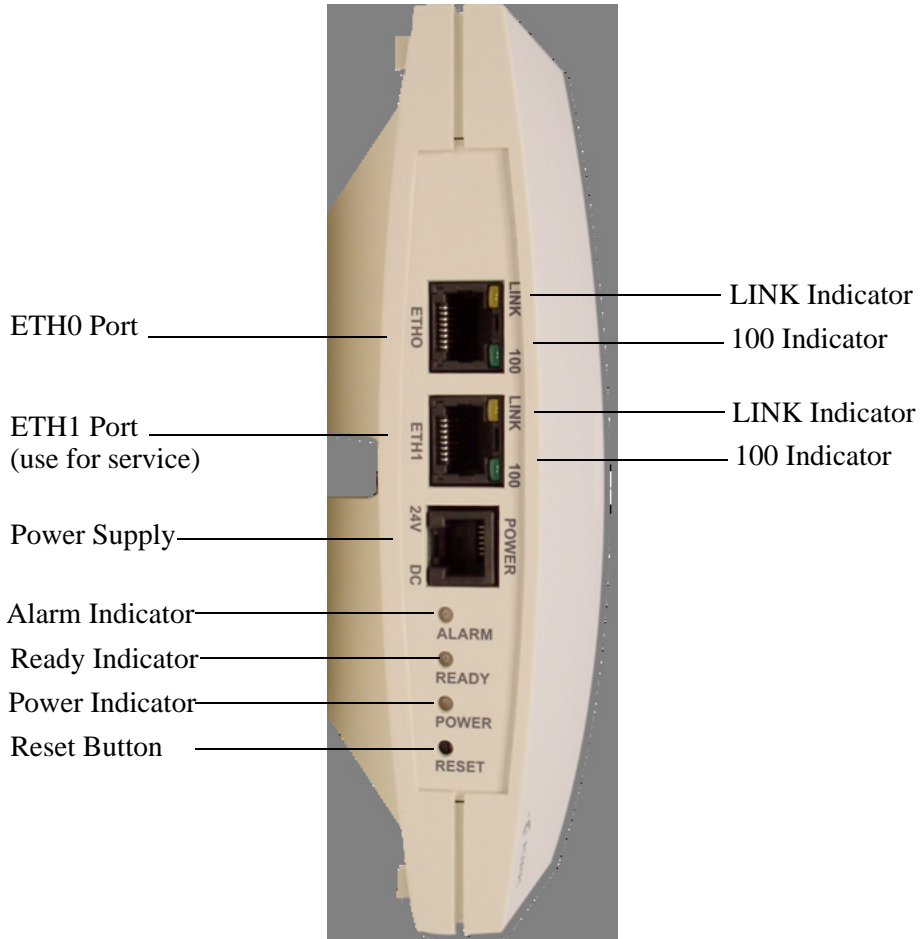
- LED that indicates whether or not the unit is functioning

**Figure 10** KIRK Wireless Server 600v3 - Front view



The KIRK Wireless Server 600v3 faceplate includes the following (see figure below).

**Figure 11** KIRK Wireless Server 600v3 - Faceplate



For information about the Reset button, refer to [“Resetting the KIRK Wireless Server 600v3 Hardware” on page 44](#).

## 4.2.4 KIRK Wireless Server 600v3 LED Indicators

### 4.2.4.1 Front Cover

The KIRK Wireless Server 600v3 front cover has one indicator describing the Wireless Server 600v3 faults and failures. The indicator is off when the KIRK Wireless Server 600v3 is not powered. The LED flashes when the KIRK Wireless Server 600v3 initializes. The indicator is on when the KIRK Wireless Server 600v3 is operating.

**Table 3** LED Indicator Description - Front Cover

LED Indicator	Meaning
Steady red	ready for use
Fast green flashing (light appears orange because of the steady red)	empty system
Slow green flashing (light appears orange because of the steady red)	in operation with one or more active connections
Slow red flashing	in operation with the maximum active connections (busy)

### 4.2.4.2 Faceplate

LED Indicator Description - Faceplate

LED Indicator	Meaning
LINK Indicator - yellow	link layer software has established connection
100 Indicator - green	line speed is 100Mbit/sec.
Alarm Indicator - red	KIRK Wireless Server 600v3 software is in error mode
Ready Indicator - green	KIRK Wireless Server 600v3 software is up running in normal mode
Power Indicator - yellow	KIRK Wireless Server 600v3 is connected to Power

## 4.2.5 KIRK Wireless Server 600v3 - Reset Button

It is possible to restart or reset the KIRK Wireless Server 600v3 by pressing the Reset button on the faceplate of the KIRK Wireless Server 600v3. For description of the faceplate, refer to [“Faceplate” on page 43](#).

### 4.2.5.1 Resetting the KIRK Wireless Server 600v3 Hardware

This section contains description of the different actions that take place when pressing the Reset button.

**Table 4** Reset Button Description

Press button	Action
Short press	Restarts the KIRK Wireless Server 600v3.
Press until LED flashes fast	Restarts the KIRK Wireless Server 600v3 in TFTP mode (Trivial File Transfer Protocol). In TFTP mode the KIRK Wireless Server 600v3 can be reached only through the GWLOAD program. For more information about using the GWLOAD program, refer to <a href="#">“Using the GWLOAD Program” on page 199</a> .
Press for a longer period	<p>Performs a system reset and configuration preset. The Alarm Indicator and Ready Indicator indicate that you are about to perform a system reset including a configuration preset within a couple of seconds if the reset button is not released.</p> <p>All system settings will be erased and the system returns to its default settings. The actual software will not be affected.</p> <p><b>Note:</b> After a system reset you must perform at short press on the Reset button again, to prevent the system to start up in DHCP client mode.</p>

## 4.3 Installing the KIRK Wireless Server 600v3

The KIRK Wireless Server 600v3 is suitable for mounting indoors on a wall or ceiling.

A KIRK Wireless Server 600v3 covers a circular area between 50 and 300 meters, depending on the environment.

**Note:** Before beginning the installation, it is important to determine the location of the KIRK Wireless Server 600v3 for the best coverage. The radio coverage depends on the construction of the building, architecture and choice of building materials. Refer to [“Environmental Requirements” on page 25](#) for more information about environmental requirements for KIRK Wireless Server 600v3.

**Note:** Avoid installing KIRK Wireless Server 600v3 on large concrete or marble columns because these columns affect radio coverage. If possible, place the KIRK Wireless Server 600v3 a minimum of one meter from these types of columns. Do not install a KIRK Wireless Server 600v3 with the antenna housings near metal objects. Be careful not to damage existing wiring or panels.

**Note:** Do not position KIRK Wireless Server 600v3 in ducts, plenums, or hollow spaces used to transport environmental air except where the duct, plenum or hollow space is created by a suspended ceiling having lay-in panels.

**Note:** To expand a coverage area with KIRK Wireless Server 600v3, additional radio units must be placed in such a way that overlap between the different KIRK Wireless Server 600v3 radio coverage is established. It is recommended that the overlap is at least 10 to 15 meters.

**Note:** Do not paint the KIRK Wireless Server 600v3 as paint contains material which can cause decreased radio coverage.

### 4.3.1 KIRK Wireless Server 600v3 Indoor Wall Mounting

For best RF coverage, the KIRK Wireless Server 600v3 must be mounted vertically on walls.

**Caution:** The KIRK Wireless Server 600v3 must not be installed at any angle other than vertical. If the KIRK Wireless Server 600v3 is placed upside-down, the coverage area of the KIRK Wireless Server 600v3 is decreased by 40 - 50% and it might not transmit or receive effectively.

**Caution:** Do not mount the KIRK Wireless Server 600v3 on soft surfaced walls such as those covered with canvas or sponge-like materials.

To install the KIRK Wireless Server 600v3 indoors:

- 1 Mount the KIRK Wireless Server 600v3 on the wall, using the anchors and screws provided.

**Note:** When you place the KIRK Wireless Server 600v3 on the screws, ensure that the screws do not touch the printed circuit board.

**Figure 12** KIRK Wireless Server 600v3 Wall Mounting



- 2 Connect the wire into the RJ45 plug on the Wireless Server 600v3.

## 4.4 Recording the Installation Information

After completing the installation of a KIRK Wireless Server 600v3 Multi-cell Solution, record the location of each KIRK Wireless Server 600v3.

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## Chapter 5 KIRK Repeater Installation

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This section provides information about the KIRK Repeater and how to unpack and install it. Installing repeaters requires a software installation as well as a hardware installation.

Before you install the equipment, ensure that a site planner defines the location of the KIRK Repeaters.

This section includes information about:

- [“Unpacking” on page 47](#)
- [“Unpacking the Shipping Container” on page 47](#)
- [“KIRK Repeater Description” on page 48](#)
- [“Installing the KIRK Repeater” on page 49](#)
- [“Recording the Installation Information” on page 52](#)
- [“Checking Indicators” on page 52](#)
- [“Powering the KIRK Repeater” on page 52](#)
- [“Programming a KIRK Repeater with the KIRK Programming Kit” on page 52](#)

### 5.1 Unpacking

#### 5.1.1 Inspect for Damage

- 1 Inspect the shipping carton for evidence of physical damage or mishandling prior to opening.
- 2 Inspect all parts for damage.
- 3 Report any damage to the carrier immediately.
- 4 If it is necessary to make a damage claim for the carrier, do not move the shipping carton until it has been examined by a representative of the carrier.
- 5 Dispose of empty cartons in accordance with local regulations.

### 5.2 Unpacking the Shipping Container

For indoor installations, the following items should be present in every box containing a KIRK Repeater:

- KIRK Repeater
- Mounting template for indoor installation
- Two mounting screws and anchors

## 5.3 KIRK Repeater Description

This section contains information about:

- “KIRK Repeater provides RF Channels to KIRK Handsets” on page 48
- “KIRK Repeater Types and Catalog Numbers” on page 48
- “KIRK Repeater Appearance and Components” on page 49
- “KIRK Repeater LED Indicators” on page 49

### 5.3.1 KIRK Repeater provides RF Channels to KIRK Handsets

The KIRK Repeater is a compact device that contains RF circuitry and transmit/receive antennas. The main function of the KIRK Repeater is to provide audio and data communication between the KIRK Handsets and the KIRK Wireless Server 600v3. The KIRK Repeater supports four RF channels for DECT or USA DECT bands.

**Note:** The KIRK Repeater is also termed by some manufacturers as the WRFP (Wireless Radio Fixed Part).

The RF communication is provided according to the band standard at the site:

- KIRK Repeater - DECT provides four RF channels of 1.88 GHz, DECT standard, used in Europe, Australia and South America.
- KIRK Repeater - USA DECT provides four RF channels of 1.9 GHz, USA DECT standard, used in North America.

### 5.3.2 KIRK Repeater Types and Catalog Numbers

The KIRK Repeater contain RF circuitry that comply with the local band standards: UPCS, DECT, or ETSI DECT. The table below includes a list of available KIRK Repeaters and their catalog numbers.

**Table 5** KIRK Repeater Catalog Numbers

<i>Variants of KIRK Repeaters</i>	<i>Part Number</i>
KIRK Repeater 1.8 GHz (conforms with standard DECT markets)	
<ul style="list-style-type: none"> <li>• four channels, Single-cell</li> <li>• four channels, Multi-cell</li> </ul>	02334600 02334601
KIRK Repeater 1.9 GHz (North America)	
<ul style="list-style-type: none"> <li>• four channels, Single-cell and Multi-cell</li> </ul>	02338200



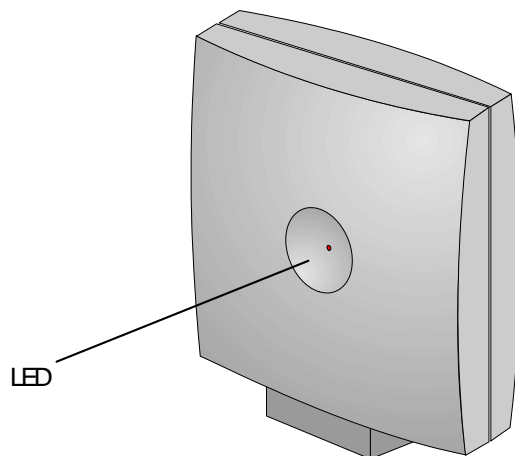
### 5.3.3 KIRK Repeater Appearance and Components

The KIRK Repeater mounting template includes two mounting holes that allow it to be affixed to the wall. See [Figure 15 on page 51](#) and [Figure 16 on page 51](#). The repeater connection panel includes the following:

- Receive and transmit wire pair to connect to a KIRK Power Supply Repeater  
**Note:** The KIRK Power Supply for the repeater is to be ordered separately (Part no. UK version: 84642421, Part no. EU version: 84642420).
- LED that indicates whether or not the unit is functioning

After connecting all ports, place the plastic cover on the connection panel to prevent dust and other particles from entering the connection ports.

**Figure 13** Isometric View of KIRK Repeater



### 5.3.4 KIRK Repeater LED Indicators

The KIRK Repeater connection panel has one LED indicator describing the repeater faults and failures. The indicator is off when the KIRK Repeater is not powered. The LED flashes when the KIRK Repeater initializes. The indicator is on when the KIRK Repeater is operating.

## 5.4 Installing the KIRK Repeater

The KIRK Wireless Server 600v3 is suitable for mounting indoors on a wall or ceiling.

**Note:** Before beginning the installation, determine the position of the repeater for best coverage. The coverage depends on the construction of the building, architecture, and the choice of building materials. Refer to [“Environmental Requirements” on page 27](#) for more information about environmental requirements for repeaters.

**Note:** The KIRK Repeater does not add channels, it only adds additional coverage area.

**Note:** The KIRK Repeater can only be registered on the system when placed within the coverage area of a KIRK Wireless Server 600v3 or within the coverage area of an already-installed repeater.

A full slot repeater covers four simultaneous speech channels. These channels are borrowed from the attached KIRK Wireless Server 600v3, and are not additional channels to the total number of channels on the system.

### 5.4.1 Wall Mounted (Vertical) Installation RF Coverage

For best RF coverage, the KIRK Repeater must be mounted vertically on walls. The antennas must always be kept perpendicular to the floor. The KIRK Repeater antennas are external and adjustable.

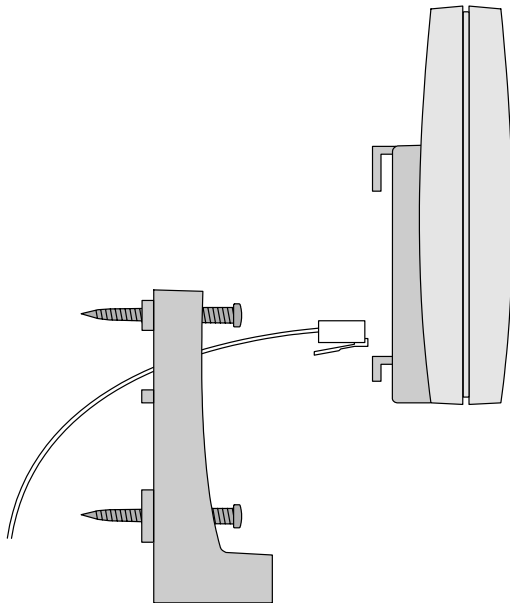
**Caution:** The KIRK Repeater must not be installed at any angle other than vertical. If the KIRK Repeater is placed upside-down, the coverage area of the KIRK Repeater is decreased by 40 - 50% and it might not transmit or receive effectively.

**Caution:** Do not mount the KIRK Repeater on soft surfaced walls such as those covered with canvas or sponge-like materials.

- 1 Pull the cable from the power supply (mains) through the mounting bracket.

**Note:** Do not mount the bracket onto the wall before pulling the cable.

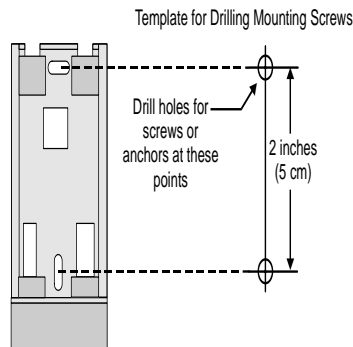
**Figure 14** Pull Power Supply Connector and Cable Through Mounting Bracket



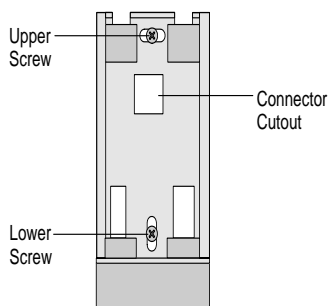
- 2 Mount the bracket onto the wall using the anchors and screws accompanying the repeater.

**Note:** Do not fasten the screws completely to allow for adjustments of the cable length when connecting the cable to the repeater.

**Figure 15** Bracket Template

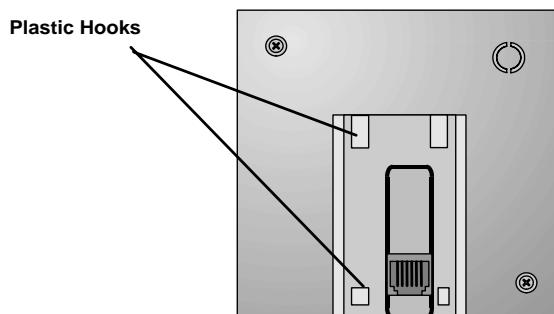


**Figure 16** Bracket Mounted onto the Wall



- 3 Connect the cable into the RJ11 connector on the repeater.
- 4 Adjust the length of the cable and then fasten the mounting bracket.
- 5 Insert the plastic hooks on the rear of the KIRK Repeater into the mounted bracket and push the repeater down until it clicks into place. See [Figure 16 on page 51](#) and [Figure 17 on page 51](#).

**Figure 17** Plastic Hooks on Rear of KIRK Repeater



**Note:** If you need to remove the KIRK Repeater, please separate it from the mounting bracket with a gentle push of a screwdriver inserted between the mounting bracket and the repeater.

## 5.5 Recording the Installation Information

After completing the installation of the KIRK Repeaters, record the location of each KIRK Repeater.

## 5.6 Checking Indicators

- Verify that the KIRK Repeater LED indicator is continuously on, indicating that the repeater is functional.

## 5.7 Powering the KIRK Repeater

### 5.7.1 Power Options

The KIRK Power Supply for the KIRK Repeater should be 9VDC, 300mA.

## 5.8 Programming a KIRK Repeater with the KIRK Programming Kit

This section provides information about:

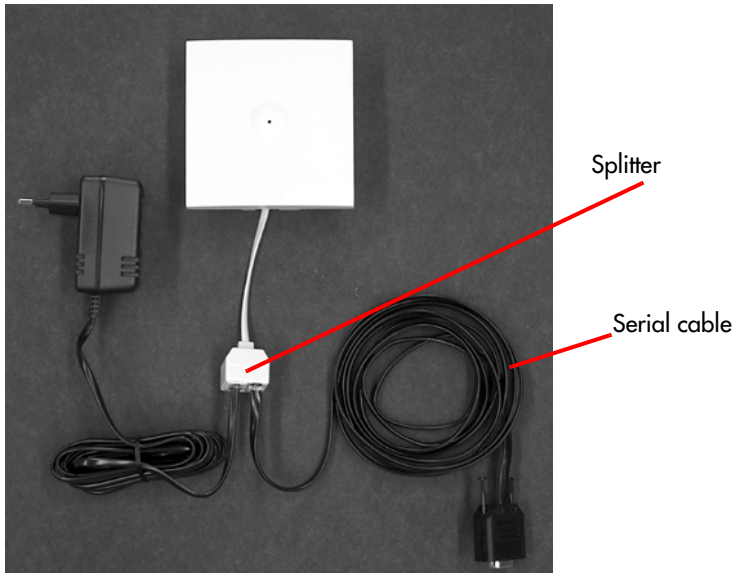
- [“Content of the KIRK Programming Kit Repeater” on page 52](#)
- [“Set up of the Hardware for Repeater Programming” on page 53](#)
- [“Programming the KIRK Repeater with the ServiceTool” on page 53](#)

### 5.8.1 Content of the KIRK Programming Kit Repeater

The KIRK Programming Kit Repeater (Part no. 02319508) consists of:

- splitter
- serial cable

**Note:** For programming the KIRK Repeater you also need the programming software (ServiceTool) and the KIRK Power Supply for the repeater. The ServiceTool is not part of the KIRK Programming Kit Repeater but can be downloaded from [www.kirktelecom.com](http://www.kirktelecom.com). The KIRK Power Supply for the repeater is to be ordered separately (Part no. UK version: 84642421, Part no. EU version: 84642420).

**Figure 18** KIRK Programming Kit Repeater

### 5.8.2 Set up of the Hardware for Repeater Programming

- 1 Unplug the repeater power supply and insert the splitter.
- 2 Connect the repeater power supply to the splitter and the mains.
- 3 Connect the serial cable to the splitter and Com port of your computer.

**Note:** Ensure that you have the appropriate power supply for the local requirements.

The repeater is now ready for programming via the ServiceTool.

### 5.8.3 Programming the KIRK Repeater with the ServiceTool

The ServiceTool is the tool you access from your desktop and use for repeater programming, handset adjustment and software download to the KIRK Handset and KIRK Repeater.

Before you start programming the repeater, ensure that the repeater is connected to the computer and the mains.

The numbering of the KIRK Wireless Server 600v3 and KIRK Repeaters has to follow the numbering shown in the tables below.

**Table 6** Repeater Numbering Table

<b>KWS600v3</b>	<b>Repeater 1</b>	<b>Repeater 2</b>	<b>Repeater 3</b>
0	64	128	192
1	65	129	193
2	66	130	194
3	67	131	195
4	68	132	196
5	69	133	197
6	70	134	198
7	71	135	199
8	72	136	200
9	73	137	201
10	74	138	202
11	75	139	203
12	76	140	204
13	77	141	205
14	78	142	206
15	79	143	207
16	80	144	208
17	81	145	209
18	82	146	210
19	83	147	211
20	84	148	212
21	85	149	213
22	86	150	214
23	87	151	215
24	88	152	216
25	89	153	217
26	90	154	218
27	91	155	219
28	92	156	220
29	93	157	221
30	94	158	222
31	95	159	223
32	96	160	224
33	97	161	225

**Table 6** Repeater Numbering Table

<b>KWS600v3</b>	<b>Repeater 1</b>	<b>Repeater 2</b>	<b>Repeater 3</b>
34	98	162	226
35	99	163	227
36	100	164	228
37	101	165	229
38	102	166	230
39	103	167	231
40	104	168	232
41	105	169	233
42	106	170	234
43	107	171	235
44	108	172	236
45	109	173	237
46	110	174	238
47	111	175	239
48	112	176	240
49	113	177	241
50	114	178	242
51	115	179	243
52	116	180	244
53	117	181	245
54	118	182	246
55	119	183	247
56	120	184	248
57	121	185	249
58	122	186	250
59	123	187	251
60	124	188	252
61	125	189	253
62	126	190	254
63	127	191	255
64	128	192	0
65	129	193	1
66	130	194	2
67	131	195	3
68	132	196	4
69	133	197	5
70	134	198	6

**Table 6** Repeater Numbering Table

<b>KWS600v3</b>	<b>Repeater 1</b>	<b>Repeater 2</b>	<b>Repeater 3</b>
71	135	199	7
72	136	200	8
73	137	201	9
74	138	202	10
75	139	203	11
76	140	204	12
77	141	205	13
78	142	206	14
79	143	207	15
80	144	208	16
81	145	209	17
82	146	210	18
83	147	211	19
84	148	212	20
85	149	213	21
86	150	214	22
87	151	215	23
88	152	216	24
89	153	217	25
90	154	218	26
91	155	219	27
92	156	220	28
93	157	221	29
94	158	222	30
95	159	223	31
96	160	224	32
97	161	225	33
98	162	226	34
99	163	227	35
100	164	228	36
101	165	229	37
102	166	230	38
103	167	231	39
104	168	232	40
105	169	233	41
106	170	234	42
107	171	235	43



**Table 6** Repeater Numbering Table

<b>KWS600v3</b>	<b>Repeater 1</b>	<b>Repeater 2</b>	<b>Repeater 3</b>
108	172	236	44
109	173	237	45
110	174	238	46
111	175	239	47
112	176	240	48
113	177	241	49
114	178	242	50
115	179	243	51
116	180	244	52
117	181	245	53
118	182	246	54
119	183	247	55
120	184	248	56
121	185	249	57
122	186	250	58
123	187	251	59
124	188	252	60
125	189	253	61
126	190	254	62
127	191	255	63
128	192	0	64
129	193	1	65
130	194	2	66
131	195	3	67
132	196	4	68
133	197	5	69
134	198	6	70
135	199	7	71
136	200	8	72
137	201	9	73
138	202	10	74
139	203	11	75
140	204	12	76
141	205	13	77
142	206	14	78
143	207	15	79
144	208	16	80

**Table 6** Repeater Numbering Table

<b>KWS600v3</b>	<b>Repeater 1</b>	<b>Repeater 2</b>	<b>Repeater 3</b>
145	209	17	81
146	210	18	82
147	211	19	83
148	212	20	84
149	213	21	85
150	214	22	86
151	215	23	87
152	216	24	88
153	217	25	89
154	218	26	90
155	219	27	91
156	220	28	92
157	221	29	93
158	222	30	94
159	223	31	95
160	224	32	96
161	225	33	97
162	226	34	98
163	227	35	99
164	228	36	100
165	229	37	101
166	230	38	102
167	231	39	103
168	232	40	104
169	233	41	105
170	234	42	106
171	235	43	107
172	236	44	108
173	237	45	109
174	238	46	110
175	239	47	111
176	240	48	112
177	241	49	113
178	242	50	114
179	243	51	115
180	244	52	116
181	245	53	117

**Table 6** Repeater Numbering Table

<b>KWS600v3</b>	<b>Repeater 1</b>	<b>Repeater 2</b>	<b>Repeater 3</b>
182	246	54	118
183	247	55	119
184	248	56	120
185	249	57	121
186	250	58	122
187	251	59	123
188	252	60	124
189	253	61	125
190	254	62	126
191	255	63	127
192	0	64	128
193	1	65	129
194	2	66	130
195	3	67	131
196	4	68	132
197	5	69	133
198	6	70	134
199	7	71	135
200	8	72	136
201	9	73	137
202	10	74	138
203	11	75	139
204	12	76	140
205	13	77	141
206	14	78	142
207	15	79	143
208	16	80	144
209	17	81	145
210	18	82	146
211	19	83	147
212	20	84	148
213	21	85	149
214	22	86	150
215	23	87	151
216	24	88	152
217	25	89	153
218	26	90	154

**Table 6** Repeater Numbering Table

<b>KWS600v3</b>	<b>Repeater 1</b>	<b>Repeater 2</b>	<b>Repeater 3</b>
219	27	91	155
220	28	92	156
221	29	93	157
222	30	94	158
223	31	95	159
224	32	96	160
225	33	97	161
226	34	98	162
227	35	99	163
228	36	100	164
229	37	101	165
230	38	102	166
231	39	103	167
232	40	104	168
233	41	105	169
234	42	106	170
235	43	107	171
236	44	108	172
237	45	109	173
238	46	110	174
239	47	111	175
240	48	112	176
241	49	113	177
242	50	114	178
243	51	115	179
244	52	116	180
245	53	117	181
246	54	118	182
247	55	119	183
248	56	120	184
249	57	121	185
250	58	122	186
251	59	123	187
252	60	124	188
253	61	125	189
254	62	126	190
255	63	127	191

**Note:** Repeater and KIRK Wireless Server numbers must not be the same. Neither can the KIRK Repeater have a number similar to another KIRK Wireless Server or another repeater in a situation where common overlap is present between the actual units (Numbers with red colour show where numbering could be identical between different units). If this occurs, handover between the different units is not possible.

**Table 7** Example of a Normal KWS600v3/KIRK Repeater Configuration

<b>Numbering of KIRK Wireless Server 600v3 and repeaters in a normal configuration</b>	
First repeater	No. of KWS + 64 Base to synchronize on: Number of KWS
Second repeater	No. of KWS + 128 Base to synchronize on: Number of KWS
Third repeater	No. of KWS + 192 Base to synchronize on: Number of KWS

**Table 8** Example of Repeater Jump Configuration

<b>Numbering of KIRK Repeaters in a repeater jump configuration</b>	
First repeater in chain	No. of KWS + 64 Base to synchronize on: Number of KWS
Second repeater in chain	No. of KWS + 128 Base to synchronize on: Number of previous repeater
Third repeater in chain	No. of KWS + 192 Base to synchronize on: Number of previous repeater

For more information about programming the KIRK Repeater with the ServiceTool, refer to the Help File in the ServiceTool. The ServiceTool is to be downloaded from [www.kirktelecom.com](http://www.kirktelecom.com).



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## Chapter 6 Preparing KIRK Handset for Use

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This section provides information about how to prepare the KIRK Handset for use, to install and charge the battery and how to retrieve the serial numbers on the different KIRK Handsets.

This section includes information about:

- [“Unpacking” on page 63](#)
- [“KIRK Handset Description” on page 64](#)
- [“Installing Battery” on page 65](#)
- [“Charging KIRK Handsets” on page 67](#)
- [“Retrieving the Serial Number of the KIRK Handset” on page 70](#)

**Note:** For more information on the different handsets, refer to the handset user guides.

### 6.1 Unpacking

#### 6.1.1 Inspect for Damage

- 1 Inspect the shipping carton for evidence of physical damage or mishandling prior to opening.
- 2 Inspect all parts for damage.
- 3 Report any damage to the carrier immediately.
- 4 If it is necessary to make a damage claim for the carrier, do not move the shipping carton until it has been examined by a representative of the carrier.
- 5 Dispose of empty cartons in accord with local regulations.

#### 6.1.2 Unpacking the Shipping Container

The following items should be present in the box containing the KIRK Handset:

- KIRK Handset
- Handset User's Guide

**Note:** The KIRK Charger is to be ordered separately (refer to [“KIRK Charger Types and Catalog Numbers” on page 64](#) for information on part numbers).

## 6.2 KIRK Handset Description

The KIRK Handset is a lightweight, ergonomically designed wireless unit that includes an LDC display and keyboard.

### 6.2.1 KIRK Handset Types and Catalog Numbers

**Table 9** Variants of KIRK Handsets

<i>Variants of KIRK Handsets and KIRK Chargers</i>
Handset sets from one of the following categories (including batteries):
KIRK 3040 Handset (Europe)
KIRK 4020 Handset (Europe)
KIRK 4040 Handset (Europe)
KIRK 4080 Handset (Europe)
KIRK 3040 Handset (North America)

### 6.2.2 KIRK Charger Types and Catalog Numbers

**Table 10** Variants of KIRK Chargers

<i>Variants of KIRK Chargers</i>
KIRK KIRK Single Charger (For KIRK 3040) (Part no. 02332419)
KIRK Single Charger (For KIRK 4020 and KIRK 4040) (Part no. 84642450)
KIRK Single Charger (For KIRK 4080) (Part no. 84642458)
KIRK Multicharger (For KIRK 4020 and KIRK 4040) Part no. 02319580)
KIRK Multicharger (For KIRK 4020 and KIRK 4040)(with UK plug) Part no. 02319581)



## 6.3 Installing Battery

Read the following information before you handle the batteries:

- Do not replace the batteries in potentially explosive environments, such as rooms where flammable liquids or gases are present.
- The battery will explode if disposed of in a fire.
- Do not charge the batteries unless you use the KIRK approved charger and the proper batteries.
- Only use battery type 84743411 in the KIRK 4020 and KIRK 4040. Do not use these batteries with other products. These batteries were designed specifically for use with the KIRK 4020 and KIRK 4040 and the KIRK Charger ONLY. Improper use of the batteries may result in fire hazard.
- Only use battery type 84743416 in the KIRK 4080. Do not use this battery with other products. This battery was designed specifically for use with the KIRK 4080 and the KIRK Charger ONLY. Improper use of the battery may result in fire hazard.
- Do not do anything that would cause the battery to short circuit.

Do not let the battery or the charger come into contact with conductive metal objects.

### 6.3.1 Installing Battery on KIRK 3040 Handsets

**Note:** The battery is connected to the handset when it is shipped from the factory.

- 1 To change the battery press down the back cover and push it 5 mm towards the headset plug.

**Figure 19** Remove Back Cover from Handset



- 2 Lift off back cover.
- 3 Place the battery plug in the slot in the battery box.
- 4 Insert battery with the label readable.
- 5 Replace the back cover.

### 6.3.2 Installing Battery on KIRK 4020/KIRK 4040/KIRK 4080 Handsets

**Note:** The battery is connected to the handset when it is shipped from the factory.

**Warning:** The battery in a KIRK 4080 handset must **not** be removed in a potentially explosive atmosphere. Only use battery type 84743416 in the KIRK 4080.

- 1 To change the battery unscrew the plate on the rear of the handset to access the battery compartment. Use a normal screw driver.
- 2 Insert the screwdriver into the small crack behind the blind cover and break to open the handset.

**Figure 20** Remove Back Cover from Handset with Screw Fastener



- 3 Place the battery plug in the slot in the battery box.
- 4 Insert battery with the label readable.
- 5 Replace the back cover.

## 6.4 Charging KIRK Handsets

### 6.4.1 Using the Charger

Each KIRK Handset is equipped with a handset charger, a compact desktop unit designed to charge and automatically maintain the correct battery charge levels and voltage.

The charger performs battery diagnostic functions. It can also switch charge/discharge functions when required in order to prolong battery life.

The charger is powered by an AC (115VAC or 230VAC) adapter that supplies the 9VDC at 230mA charger requirement.

**Figure 21** KIRK Single Charger for KIRK 3040



**Figure 22** KIRK Single Charger for KIRK 4020 and KIRK 4040



**Figure 23** KIRK Single Charger for KIRK 4080



**Figure 24** KIRK Multicharger for KIRK 4020 and KIRK 4040



### 6.4.2 Charging Battery

When charging the battery for the first time, it is necessary to leave the handset in the charger for 14 - 16 hours before the battery is fully charged and the handset ready for use.

**Warning:** Do not charge KIRK 4080 in a potentially explosive atmosphere. Use only the dedicated charger (orange) for charging of KIRK 4080 handset.

**Note:** During normal operation, it takes approximately 3 1/2 hours to charge the handset from fully discharged to its full capacity.

- Place the KIRK Handset in the charger.

For correct charging, be sure the room temperature is between 0°C and 25°C. Do not place the handset in direct sunlight. The battery has a built-in heat sensor which will stop charging if the battery temperature is too high.

If the handset is turned off when placed in charger, only the LED indicates the charging. When handset is turned off, the LED flashes at a low frequency while charging and lights constantly when the charging is finished. There will be no reaction for incoming calls.

If the handset is turned on when charging, the display shows the charging status. The display goes back to normal mode when fully charged. It will not vibrate. B-answer is inactive. The handset reacts normally for incoming calls.

It is necessary to recharge the battery when the display shows **BATTERY LOW**, or if the handset cannot be turned on. When the battery is fully discharged, up to 10 minutes may pass before charging begins (display lights up). When the charger begins the charging, status is shown on the display if the handset is turned on.

### 6.4.3 Charger LED Indicators

The KIRK Handset displays a progress indicator bar that shows how fully charged the battery is.

The handset LED gives the following indication:

- LED continuously on - handset is fully charged
- LED flashing - handset is charging

## 6.5 Retrieving the Serial Number of the KIRK Handset

To enable service to the handset, the serial number must be programmed into the system database via the web based Administration Page of the KIRK Wireless Server 600v3. (For more information, refer to [“Registering KIRK Handsets” on page 155](#)).

The serial number of each handset is printed on the label, which is placed behind the the battery.

To show the serial number on the handset display, press \*99984\*, and then press ✓; the serial number appears on the handset display.

### 6.5.1 Retrieving Serial Number on KIRK 3040 Handsets

- 1 Press down the back cover and push it 5 mm towards the headset plug.

**Figure 25** Remove Back Cover from Handset



- 2 Lift off back cover.
- 3 Lift the battery and read the serial number.
- 4 Replace battery and back cover.

**Note:** To show the serial number on the handset display, press \*99984\*, and then press ✓; the serial number appears on the handset display.

### 6.5.2 Retrieving Serial Number on KIRK 4020/KIRK 4040/KIRK 4080 Handsets

- 1 Use a screwdriver to unscrew the plate on the rear of the handset to access the battery compartment.

**Warning:** The plate on the rear of the KIRK 4080 handset must **not** be removed in a potentially explosive atmosphere.

- 2 Insert the screwdriver into the small crack behind the blind cover and press to open the handset.

**Figure 26** Remove Back Cover from Handset with Screw Fastener



- 3 Lift the battery and read the serial number.
- 4 Replace battery and back cover.

**Note:** To show the serial number on the handset display, press \*99984\*, and then press ✓; the serial number appears on the handset display.





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## Chapter 7 Configuring KIRK Wireless Server 600v3

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This section provides you with information on how to power up the KIRK Wireless Server 600v3 and connect it to a computer, and also how to configure a KIRK Wireless Server 600v3 Single-cell solution and a KIRK Wireless Server 600v3 Multi-cell solution through the web based Administration Page and the KIRK Configuration Tool.

Using the web based Administration Page is recommended when configuring small to medium-sized installations. Using the KIRK Configuration Tool is recommended when configuring medium-sized to large installations.

**Note:** With the KIRK Configuration Tool it is possible to work offline.

This section includes information about:

- [“Powering up the KIRK Wireless Server 600v3” on page 73](#)
- [“Connecting a Computer to the KIRK Wireless Server 600v3” on page 74](#)
- [“Accessing the Web Based Administration Page” on page 75](#)
- [“Accessing the KIRK Configuration Tool” on page 77](#)
- [“Configuring Single-Cell Solution through Administration Page” on page 79](#)
- [“Configuring Multi-Cell Solution through Administration Page” on page 89](#)
- [“Configuring Single-Cell Solution through KIRK Configuration Tool” on page 130](#)
- [“Configuring Multi-Cell Solution through KIRK Configuration Tool” on page 133](#)

### 7.1 Powering up the KIRK Wireless Server 600v3

After installing the KIRK Wireless Server 600v3 you need to power up the KIRK Wireless Server 600v3. There are two ways of powering up the KIRK Wireless Server 600v3.

- Power over Ethernet (PoE)  
Power options for the KIRK Wireless Server 600v3 is 24VDC, 18 W maximum when using Power over Ethernet.
- Local Power Supply  
Power options for the KIRK Wireless Server 600v3 is 48VDC, 1 W maximum when using Local Power Supply.

**Note:** Only use one of the power options.

#### 7.1.1 Power over Ethernet

The KIRK Wireless Server 600v3 supports Power over Ethernet, PoE 802.3af.

### 7.1.2 Local Power Supply

Powering the KIRK Wireless Server 600v3 with a local power supply can be done using the power input on the KIRK Wireless Server 600v3.

**Note:** The Power Supply for the KIRK Wireless Server 600v3 is to be ordered separately (Part no. EU version: 84642449).

### 7.1.3 Checking Indicators

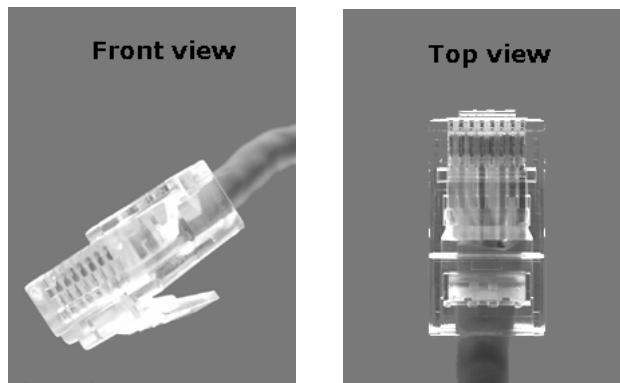
- Verify that the KIRK Wireless Server 600v3 LED indicator is continuously on, indicating that the KIRK Wireless Server 600v3 is functional.

## 7.2 Connecting a Computer to the KIRK Wireless Server 600v3

The KIRK Wireless Server 600v3 communicates with the computer through a Standard LAN Patch cable.

**Note:** The LAN port of the KIRK Wireless Server 600v3 is a RJ45 connector.

**Figure 27** Standard LAN Patch Cable (RJ45)



- 1 Connect the LAN cable to the computer.



- 2 Connect the LAN cable to the **ETH1** port of the KIRK Wireless Server 600v3.



## 7.3 Accessing the Web Based Administration Page

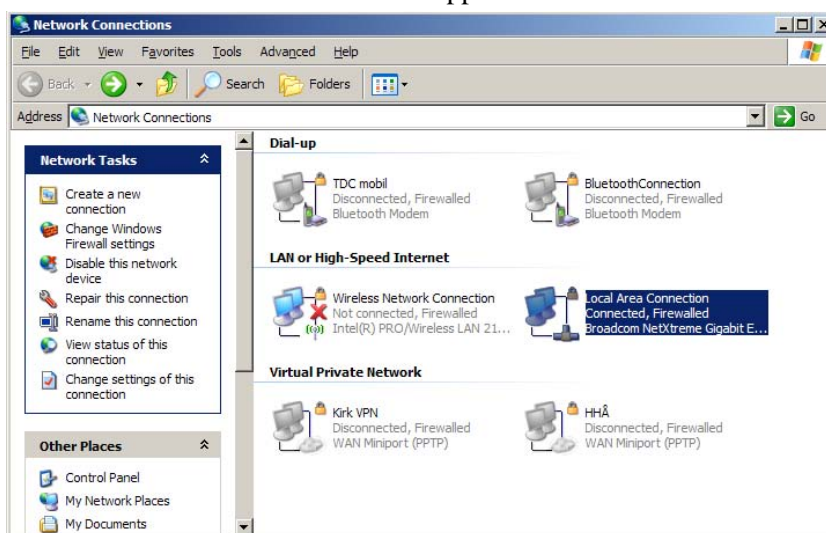
In order for your computer to communicate with the KIRK Wireless Server 600v3 it is necessary to change the computer's Internet Protocol Properties to use the following:

- IP address: **192.168.1.2**
- Sub-net mask: **255.255.255.0**

### 7.3.1 How to Change Internet Protocol Properties using Windows XP

- 1 From the Start menu, point to **Connect to** and then click **Show all connections**.

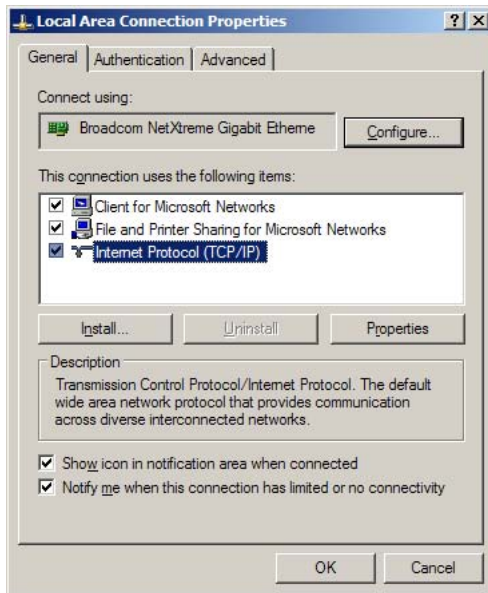
A **Network Connections** window appears.



- 2 Under **Lan or High-Speed Internet**, right-click on **Local Area Connection** and click **Properties**.

A **Local Area Connection Properties** dialog box appears.

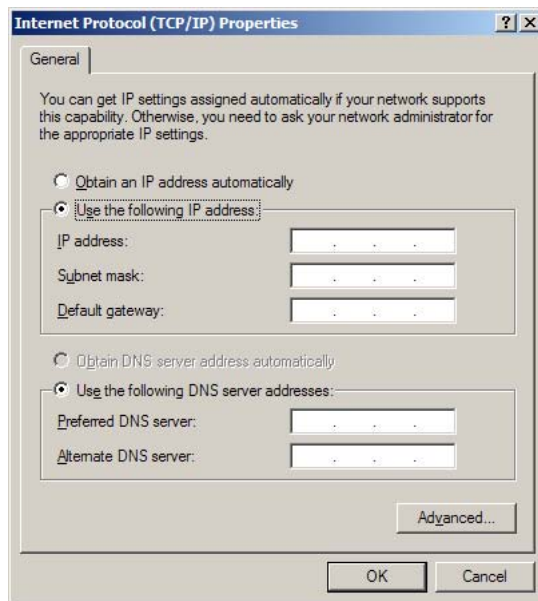
**Figure 28** Local Area Connection Properties dialog box



**3** In the **General** tab, select **Internet Protocol (TCP/IP)**, and then click **Properties**.

An **Internet Protocol (TCP/IP) Properties** dialog box appears.

**Figure 29** Internet Protocol Properties dialog box



**4** Click **Use the following IP address**, and then type **192.168.1.2** in the **IP address** field.

**5** In the **Subnet mask** field, type **255.255.255.0**.

**6** Click **OK**.

You can now reach the KIRK Wireless Server 600v3 using a standard web browser.

### 7.3.2 How to Access the Administration Page

The web based Administration Page is accessed through a standard web browser.

- 1 Open a web browser.
- 2 In the browsers **Address** bar, type **http://192.168.1.1**, and then press **ENTER**.

**Note:** The KIRK Wireless Server 600v3 is pre-configured with the IP address: 192.168.1.1 through the ETH1 port.

The KIRK Wireless Server 600v3 Administration Page appears.

**Figure 30** Main page of the Web Based Administration Page

## KIRK Wireless Server 600/3

Configuration	Info	Admin	License	Update	NTP	HTTP Server	HTTP Client	Logging	SNMP	Telnet
<b>General</b>										
IP										
ETH0										
ETH1										
LDAP										
DECT										
<b>Administration</b>										
DECT										
Download										
Upload										
Diagnostics										
Reset										

<b>Version</b>	6.00 dvl IP1200[06-60319], Bootcode[365], HW[7] 8192/16384
<b>SerialNo</b>	00-90-33-0f-03-10
<b>Coder</b>	12 Channels of G.711,G.726,G.729,G.723
<b>SNTP Server</b>	0.0.0.0
<b>Time</b>	** ** * ** ** **
<b>Uptime</b>	0d 0h 46m 17s
DECT	
<b>Firmware</b>	14125500 PCS04Ap
<b>System ARI</b>	000046507424
<b>Frequency</b>	DECT 1.8GHz

## 7.4 Accessing the KIRK Configuration Tool

The KIRK Configuration Tool of the KIRK Wireless Server 600v3 is to be downloaded from [www.kirktelecom.com](http://www.kirktelecom.com).

### 7.4.1 Installing the KIRK Configuration Tool

Once you download the KIRK Configuration Tool of the KIRK Wireless Server 600v3, install it by clicking on the **KWS600v3\_Configuration\_Tool\_1.X.X.X\_setup.exe** and by following the resulting Install Wizard prompts.

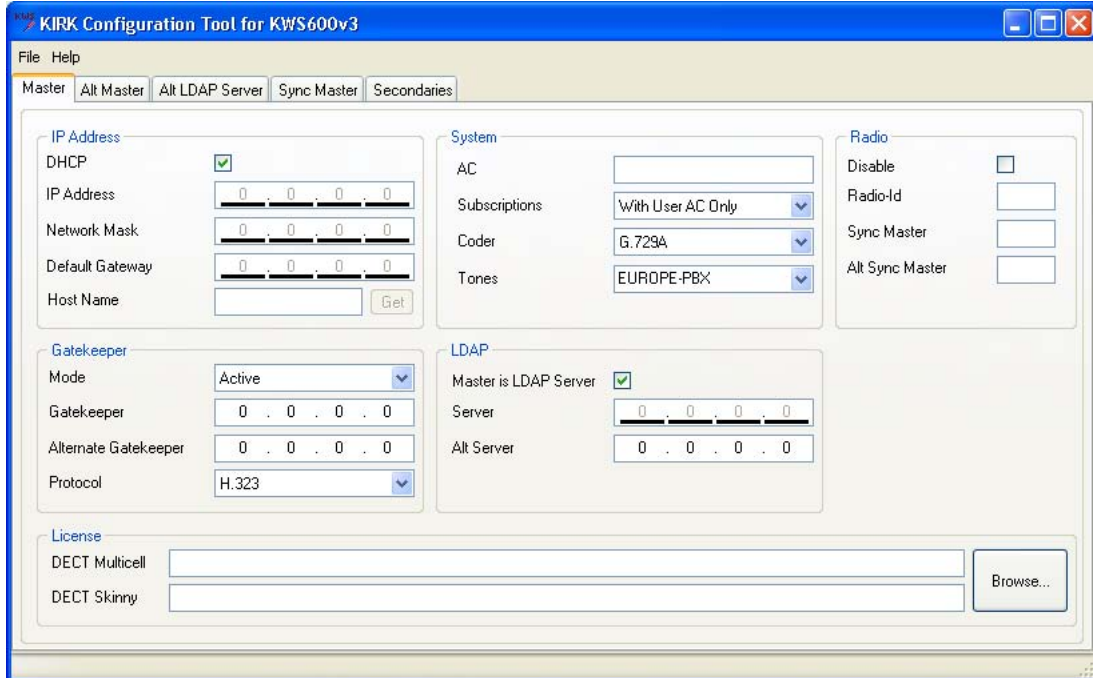
## 7.4.2 Starting the KIRK Configuration Tool

When you have the KIRK Configuration Tool application installed, start it from your computer.

- 1 Double-click the KIRK Configuration Tool icon or locate the program under the Start menu to open the KIRK Configuration Tool application on your desktop.

A start-up window appears.

**Figure 31** KIRK Configuration Tool startup window

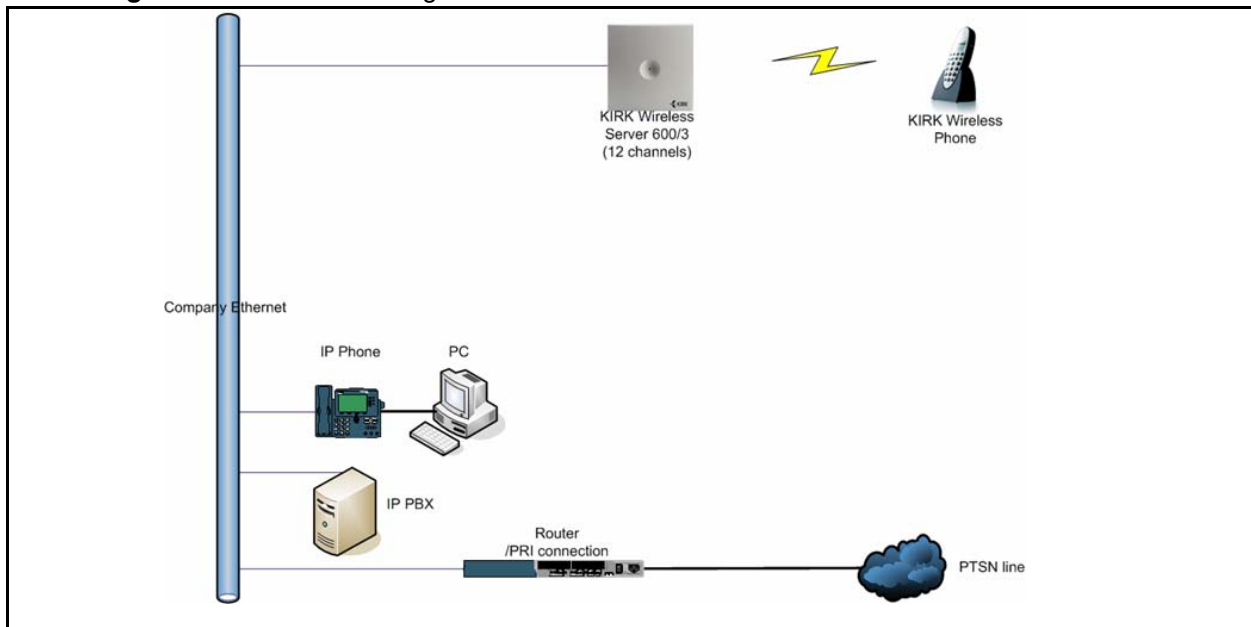


## 7.5 Configuring Single-Cell Solution through Administration Page

**Note:** Using the web based Administration Page is recommended when configuring small to medium-sized installations.

This section describes how to configure a KIRK Wireless Server 600v3 Single-cell solution.

**Figure 32** KWS600v3 Single-cell installation



For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page”](#) on page 75.

This section contains information about:

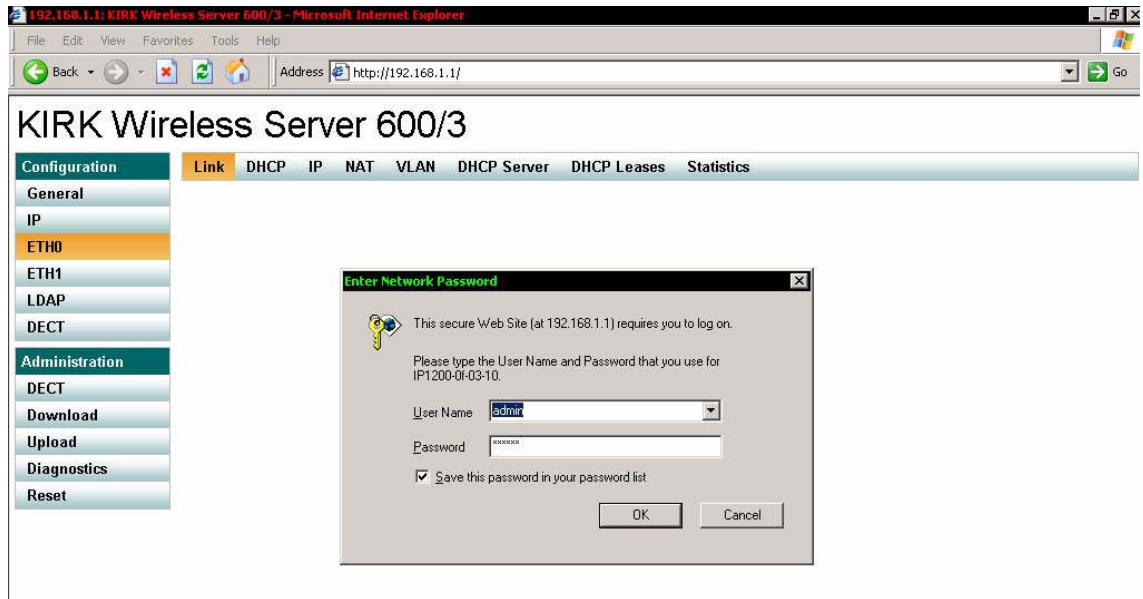
- [“Entering a User Name and Password”](#) on page 80
- [“Assigning a Specific IP Address”](#) on page 82
- [“Configuring Ethernet Link”](#) on page 83
- [“Configuring DECT System”](#) on page 84
- [“Configuring DECT Master”](#) on page 86
- [“Configuring DECT Radio”](#) on page 87
- [“Configuring TOS \(Type of Service\) Priorities”](#) on page 88

### 7.5.1 Entering a User Name and Password

First time you access the Administration Page, you need to log on with user name and a password.

**Note:** The default user name of the system is **admin** and the default password of the system is **ip1200**.

**Figure 33** Adm. Page: Enter Network Password dialog box



- 1 In the **User Name** field, type **admin**.
- 2 In the **Password** field, type **ip1200**
- 3 Click **OK**.



### 7.5.1.1 Changing User Name and Password

Optionally, you can choose to change the user name and password.

- 1 Under the **Configuration** menu, click **General**, and then click **admin**.

**Figure 34** Adm. Page: Configuration/General/Admin/Change Password page

## KIRK Wireless Server 600/3

The screenshot shows the administration interface for the KIRK Wireless Server 600/3. The left sidebar contains a 'Configuration' menu with 'General' selected, and an 'Administration' menu with options like DECT, Download, Upload, Diagnostics, and Reset. The main content area has a top navigation bar with tabs for 'Info', 'Admin', 'License', 'Update', 'NTP', 'HTTP Server', 'HTTP Client', 'Logging', 'SNMP', and 'Telnet'. The 'Admin' tab is active, displaying a form with fields for 'Device Name', 'User Name' (containing 'admin'), and 'Password' (with two masked password fields). An 'OK' button is located at the bottom of the form.

- 2 In the **User name** field, type a user name.
- 3 In the **Password** field, type a new password, then type the password again in the field below to confirm it.
- 4 Click **OK** to change the password.

## 7.5.2 Assigning a Specific IP Address

To assign a specific IP address to the KIRK Wireless Server 600v3, it is necessary to disable the DHCP mode and then assign a specific IP address to the KIRK Wireless Server 600v3. The new IP address and network address will be provided by the system administrator.

- 1 Under the **Configuration** menu, click **ETH0**, and then click **DHCP**.

**Figure 35** Adm. Page: Configuration/ETH0/DHCP page

### KIRK Wireless Server 600/3

Configuration	Link	DHCP	IP	NAT	VLAN	DHCP Server	DHCP Leases	Statistics
General								
IP								
<b>ETH0</b>	Mode <span style="border: 1px solid black; padding: 2px;">disabled</span> Current mode - client							
ETH1	<input type="button" value="OK"/> <input type="button" value="Cancel"/>							
LDAP	Waiting for lease!							
DECT								
<b>Administration</b>								
DECT								
Download								
Upload								
Diagnostics								
Reset								

- 2 From the **Mode** list, select **Disabled**, and then click **OK**.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.
- 4 Under the **Configuration** menu, click **ETH0**, and then click **IP**.

**Note:** It is necessary to use the ETH0 port when integrating the KIRK Wireless Server 600v3 on the local network.

**Figure 36** Adm. Page: Configuration/ETH0/IP page

### KIRK Wireless Server 600/3

Configuration	Link	DHCP	IP	NAT	VLAN	DHCP Server	DHCP Leases	Statistics						
General														
IP														
<b>ETH0</b>	IP address <input type="text" value="192.168.0.1"/>													
ETH1	Network mask <input type="text" value="255.255.255.0"/>													
LDAP	Default gateway <input type="text"/>													
DECT	DNS server <input type="text"/>													
<b>Administration</b>	Proxy ARP <input type="checkbox"/>													
DECT	Multicast <input checked="" type="checkbox"/>													
Download	Routes													
Upload	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Network destination</th> <th>Network mask</th> <th>Gateway</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>								Network destination	Network mask	Gateway	<input type="text"/>	<input type="text"/>	<input type="text"/>
Network destination	Network mask	Gateway												
<input type="text"/>	<input type="text"/>	<input type="text"/>												
Diagnostics	<input type="button" value="OK"/> <input type="button" value="Cancel"/>													
Reset														

- 5 In the **IP address** field, type the new IP address.  
The new IP address is now the default address when accessing the KIRK Wireless Server 600v3.
- 6 In the **Network mask** field, type a new network mask.  
Contact your system administrator for more information.
- 7 In the **Default gateway** field, type the IP address of the default gateway.  
Contact your system administrator for more information.
- 8 Click **OK**.
- 9 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.5.3 Configuring Ethernet Link

- 1 Under the **Configuration** menu, click **ETH0**, and then click **Link**.

**Figure 37** Adm. Page: Configuration/ETH0/Link page

#### KIRK Wireless Server 600/3

The screenshot shows the configuration page for the ETH0 interface. The left sidebar contains a menu with the following items: Configuration, General, IP, ETH0 (highlighted), ETH1, LDAP, DECT, Administration, DECT, Download, Upload, Diagnostics, and Reset. The main content area has tabs for Link, DHCP, IP, NAT, VLAN, DHCP Server, DHCP Leases, and Statistics. The Link tab is active, showing a dropdown menu for Link set to 'auto', the text 'State=down Autoneg=incomplete', and an OK button.

- 2 From the **Link** list, select **auto**, and then click **OK**.  
When selecting **auto**, the link speed will be determined by the network switch.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.

## 7.5.4 Configuring DECT System

- 1 Under the **Configuration** menu, click **DECT**, and then click **System**.

**Figure 38** Adm. Page: Configuration/DECT/System page

### KIRK Wireless Server 600/3

Configuration	System	Features	Master	Radio
<b>General</b>				
IP				
ETH0				
ETH1				
LDAP				
<b>DECT</b>				
<b>Administration</b>				
DECT				
Download				
Upload				
Diagnostics				
Reset				

Name	<input type="text" value="DECT"/>
Pwd	<input type="text"/>
	<input type="text"/>
Sys-Mask	<input type="text"/>
AC	<input type="text"/>
Subscriptions	<input type="text" value="Allow Anonymous"/>
Tones	<input type="text" value="EUROPE-PBX"/>
Enbloc Dialing	<input type="checkbox"/>
Local R-Key/Display Handling	<input checked="" type="checkbox"/>
DTMF through RTP channel	<input type="checkbox"/>
Coder	<input type="text" value="G729A"/>
Frame	<input type="text" value="60"/>
Exclusive	<input type="checkbox"/>
SC	<input type="checkbox"/>

- 2 In the **Name** field, the name **MUST ALWAYS** be **DECT**.

If changing the name, the system cannot operate.

- 3 In the **PDW** (password) field, type the password, and then type it again in the field below.

- 4 From the **Subscriptions** list, select either **Allow Anonymous**, **With User AC only**, or **Disabled**.

**Note:** It is recommended to select **With User AC only**. When subscribing a new handset to the system it is possible to use an authentication code (AC). If you want to use the authentication code, you must select **With User AC only**. For more information about subscription of handsets and authentication codes, refer to [“Subscribing Handsets” on page 162](#)

- 5 From the **Tones** list, select a ring tone.

- 6 If SIP Protocol: Select the **Enbloc Dialing** check box.

The **Enbloc Dialing** check box has to be enabled in a SIP configuration in order for the handset to collect all digits, before passing them on to a call handler for routing.

**Note:** The **Enbloc Dialing** check box is not to be selected, when using H323 Protocol or SKINNY Protocol.

- 7 If H323 Protocol and SKINNY Protocol: Deselect the **Local R-Key/Display Handling** check box.

**Note:** When using SIP Protocol, the **Local R-Key/Display Handling** check box has to be enabled to support supplementary services such as **On hold** and **Call transfer**.

- 8 If SIP Protocol: Select the **DTMF through RTP channel** check box.

The **DTMF through RTP channel** check box has to be enabled if DTMF tones are needed.

**Note:** The **DTMF through RTP channel** check box is not to be selected, when using H323 Protocol or SKINNY Protocol.

- 9 From the **Coder** list, select a voice compression value that matches your telephony infrastructure.

Contact your system administrator for more information.

- 10 In the **Frame** field, type the desired frame length in milliseconds and then select either **Exclusive** or **SC** (Silence Compression).

Contact your system administrator for more information.

**Note:** If the **Exclusive** check box is selected for the coder, then the KIRK Wireless Server 600v3 is forced to use the coder.

- 11 Click **OK**.

- 12 Click **Reset** (under **Administration** menu) to save your configuration.

## 7.5.5 Configuring DECT Master

On the **Master** page you can establish a communication protocol between the KIRK Wireless Server 600v3 and a call handler.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

**Figure 39** Adm. Page: Configuration/DECT/Master page

The screenshot shows the configuration page for the DECT Master. The page title is "KIRK Wireless Server 600/3". On the left, there is a navigation menu with two main sections: "Configuration" and "Administration". Under "Configuration", the options are General, IP, ETH0, ETH1, LDAP, DECT (which is highlighted in orange), and Administration. Under "Administration", the options are DECT, Download, Upload, Diagnostics, and Reset. The main content area has four tabs: System, Features, Master (which is selected and highlighted in orange), and Radio. The "Master" tab contains the following fields: "Mode" (a dropdown menu set to "Active"), "GK" (a text input field), "Alt-GK" (a text input field), "GK-Id" (a text input field), and "Prot" (a dropdown menu set to "H323"). At the bottom of the form are "OK" and "Cancel" buttons.

- 2 From the **Mode** list, select **Active**.
- 3 In the **GK** (Gate Keeper) field, type the IP address of your call handler.  
Contact your system administrator for more information.
- 4 In the **Alt-GK** (Alternative Gate Keeper) field, type an alternative IP address of your call handler.  
Contact your system administrator for more information.
- 5 From the **Prot** (Protocol) list, select either **H323**, **SIP** or **SKINNY** depending on the protocol you are using.
- 6 Click **OK**.
- 7 Click **Reset** (under **Administration** menu) to save your configurations.

## 7.5.6 Configuring DECT Radio

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

**Figure 40** Adm. Page: Configuration/DECT/Master page

### KIRK Wireless Server 600/3

The screenshot shows the configuration page for the KIRK Wireless Server 600/3. The page is titled "KIRK Wireless Server 600/3" and has a navigation menu on the left with the following items: Configuration, General, IP, ETH0, ETH1, LDAP, DECT (highlighted), Administration, DECT, Download, Upload, Diagnostics, and Reset. The main content area has tabs for System, Features, Master, and Radio (highlighted). Under the Radio tab, there are several configuration options: Disable (checkbox), Master (text field with value 127.0.0.1), Alt-Master (text field), Radio-Id (text field with value 1), Sync-Source (text field), and Alt-Sync-Source (text field). At the bottom of the configuration area are OK and Cancel buttons.

- 2 In the **Radio-Id** field, type **1**.
- 3 Click **OK**.
- 4 Click **Reset** (under **Administration** menu) to save your configuration.

## 7.5.7 Configuring TOS (Type of Service) Priorities

It is possible to change the TOS (Type of Service) priorities in a system. The TOS priority depends on the network used.

- 1 Under the **Configuration** menu, click **IP**.

**Figure 41** Adm. Page: Configuration/IP/Settings page

### KIRK Wireless Server 600/3

Configuration	Settings	NAT	H.323-NAT	PPP-Config	PPP-State	Routing
General						
<b>IP</b>	TOS priority <input type="text" value="0x10"/>					
ETH0	Port ranges					
ETH1	First UDP-RTP port <input type="text"/>		Number of ports <input type="text"/>			
LDAP	First UDP-NAT port <input type="text"/>		Number of ports <input type="text"/>			
DECT	Local Networks					
<b>Administration</b>						
DECT	<b>Address</b>		<b>Mask</b>			
Download	<input type="text"/>		<input type="text"/>			
Upload	Private Networks					
Diagnostics	<b>Address</b>		<b>Mask</b>			
Reset	<input type="text"/>		<input type="text"/>			
		<input type="button" value="OK"/>		<input type="button" value="Cancel"/>		

- 2 In the **TOS priority** field, type a TOS priority.

Depending on the network, it may be necessary to change the TOS priority.

- Most networks: The default TOS priority is: **0x10**
- If CISCO network: It is recommended to change the TOS priority to **0x68,0xb8**.

For information about the TOS priorities used in your network, contact you system administrator.

- 3 Click **Reset** (under **Administration** menu) to save your configuration.

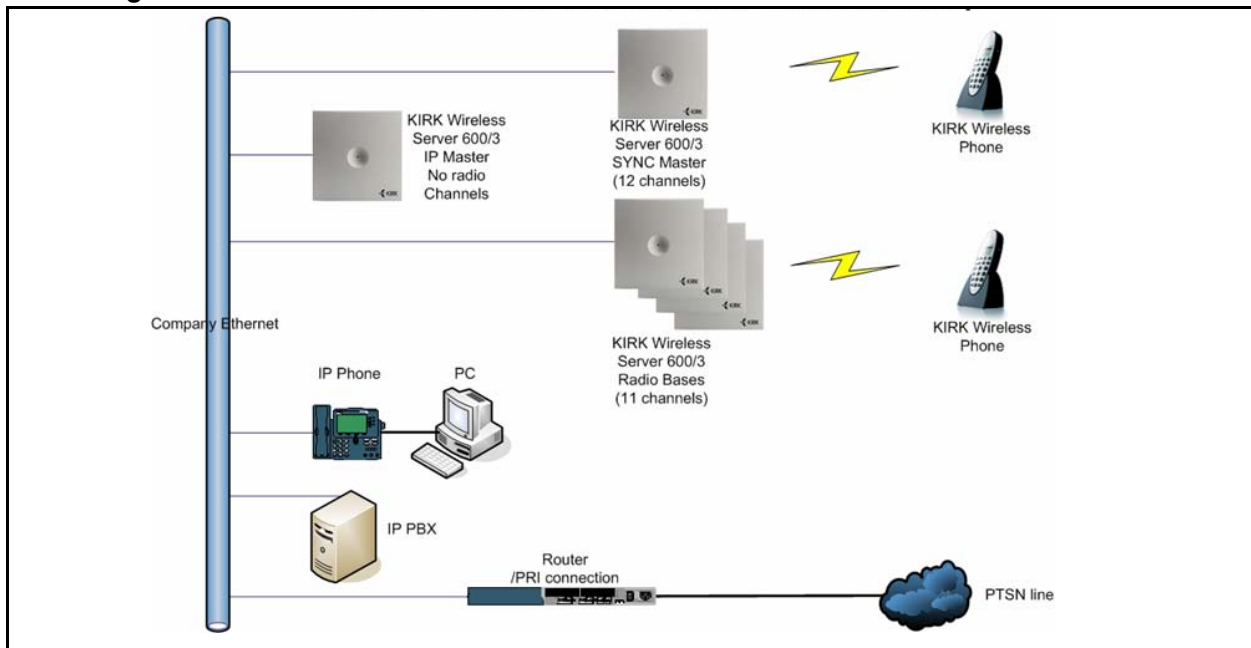


## 7.6 Configuring Multi-Cell Solution through Administration Page

**Note:** Using the web based Administration Page is recommended when configuring small to medium-sized installations.

This section describes how to configure a KIRK Wireless Server 600v3 Multi-cell solution.

**Figure 42** KWS600v3 Multi-cell installation



This section contains information about:

- [“Configuring the Master \(Primary\) KIRK Wireless Server 600v3” on page 90](#)
- [“Configuring Sync Master” on page 103](#)
- [“Configuring the Alternative Master KIRK Wireless Server 600v3” on page 108](#)
- [“Configuring the Secondary KIRK Wireless Server 600v3” on page 114](#)
- [“Configuring Secondary KIRK Wireless Server 600v3 Using a Back-Up File” on page 123](#)
- [“Configuring Standalone LDAP Server” on page 124](#)
- [“Configuring Alternative LDAP Server” on page 127](#)

## 7.6.1 Configuring the Master (Primary) KIRK Wireless Server 600v3

This section describes how to configure a Master KIRK Wireless Server 600v3 in a multi-cell solution.

This section includes information about:

- “Entering a User Name and Password (Primary)” on page 90
- “Assigning a Specific IP Address (Primary)” on page 92
- “Obtaining a Multi-Cell License (Primary)” on page 93
- “Configuring Ethernet Link (Primary)” on page 95
- “Setting LDAP Mode (Primary)” on page 96
- “Setting LDAP Replicator (Primary)” on page 97
- “Configuring DECT System (Primary)” on page 98
- “Configuring DECT Master (Primary)” on page 100
- “Configuring DECT Radio (Primary)” on page 101
- Configuring TOS (Type of Service) Priorities (Primary) on page 102

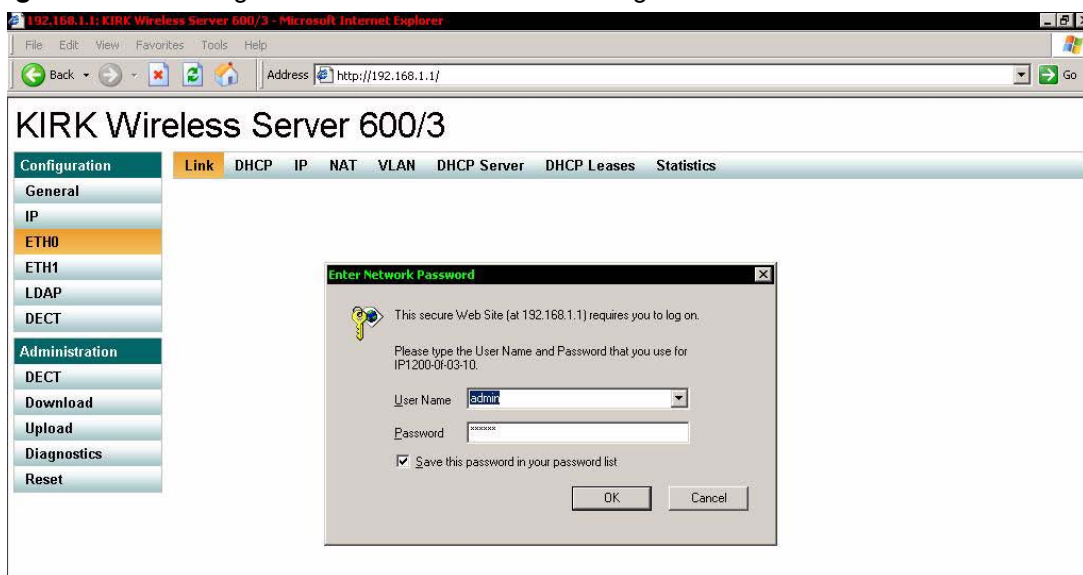
For information on accessing the web based Administration Page, refer to “[Accessing the Web Based Administration Page](#)” on page 75.

### 7.6.1.1 Entering a User Name and Password (Primary)

First time you access the Administration Page, you need to log on with user name and a password.

**Note:** The default user name of the system is **admin** and the default password of the system is **ip1200**.

**Figure 43** Adm. Page: Enter Network Password dialog box



- 1 In the **User Name** field, type **admin**.
- 2 In the **Password** field, type **ip1200**
- 3 Click **OK**.

#### 7.6.1.1.1 Changing User Name and Password

Optionally, you can choose to change the user name and password.

- 1 Under the **Configuration** menu, click **General**, and then click **admin**.

The following dialog box appears.

**Figure 44** Adm. Page: Configuration/General/Admin/Change Password page

### KIRK Wireless Server 600/3

The screenshot shows the configuration interface for a KIRK Wireless Server 600/3. On the left is a navigation menu with sections: Configuration (General, IP, ETH0, ETH1, LDAP, DECT) and Administration (DECT, Download, Upload, Diagnostics, Reset). The top navigation bar includes: Info, Admin (selected), License, Update, NTP, HTTP Server, HTTP Client, Logging, SNMP, and Telnet. The main content area displays the 'Change Password' dialog box with the following fields: Device Name (empty), User Name (admin), Password (masked with dots), and a confirmation Password field (also masked with dots). An OK button is located at the bottom left of the dialog box.

- 2 In the **User name** field, type a user name.
- 3 In the **Password** field, type a new password, then type the password again in the field below to confirm it.
- 4 Click **OK** to change the password.

**Note:** In a KIRK Wireless Server 600v3 Multi-cell solution, all primary and secondary KIRK Wireless Server 600v3 must have the same password.

### 7.6.1.2 Assigning a Specific IP Address (Primary)

To assign a specific IP address to the KIRK Wireless Server 600v3, it is necessary to disable the DHCP mode and then assign a specific IP address to the KIRK Wireless Server 600v3. The new IP address and network address will be provided by the system administrator.

- 1 Under the **Configuration** menu, click **ETH0**, and then click **DHCP**.

**Figure 45** Adm. Page: Configuration/ETH0/DHCP page

## KIRK Wireless Server 600/3

Configuration	Link	DHCP	IP	NAT	VLAN	DHCP Server	DHCP Leases	Statistics
<b>General</b>								
IP								
<b>ETH0</b>	Mode <span>disabled</span> Current mode - client							
ETH1	<input type="button" value="OK"/> <input type="button" value="Cancel"/>							
LDAP	Waiting for lease!							
DECT								
<b>Administration</b>								
DECT								
Download								
Upload								
Diagnostics								
Reset								

- 2 From the **Mode** list, select **Disabled**, and then click **OK**.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.
- 4 Under the **Configuration** menu, click **ETH0**, and then click **IP**.

**Note:** It is necessary to use the ETH0 port when integrating the KIRK Wireless Server 600v3 on the local network.

**Figure 46** Adm. Page: Configuration/ETH0/IP page

## KIRK Wireless Server 600/3

Configuration	Link	DHCP	IP	NAT	VLAN	DHCP Server	DHCP Leases	Statistics						
<b>General</b>														
IP														
<b>ETH0</b>	IP address <input type="text" value="192.168.0.1"/>													
ETH1	Network mask <input type="text" value="255.255.255.0"/>													
LDAP	Default gateway <input type="text"/>													
DECT	DNS server <input type="text"/>													
<b>Administration</b>	Proxy ARP <input type="checkbox"/>													
DECT	Multicast <input checked="" type="checkbox"/>													
Download	Routes													
Upload	<table border="1"> <thead> <tr> <th>Network destination</th> <th>Network mask</th> <th>Gateway</th> </tr> </thead> <tbody> <tr> <td><input type="text"/></td> <td><input type="text"/></td> <td><input type="text"/></td> </tr> </tbody> </table>								Network destination	Network mask	Gateway	<input type="text"/>	<input type="text"/>	<input type="text"/>
Network destination	Network mask	Gateway												
<input type="text"/>	<input type="text"/>	<input type="text"/>												
Diagnostics	<input type="button" value="OK"/> <input type="button" value="Cancel"/>													
Reset														

- 5** In the **IP address** field, type the new IP address.  
The new IP address is now the default address when accessing the KIRK Wireless Server 600v3.
- 6** In the **Network mask** field, type a new network mask.
- 7** In the **Default gateway** field, type the IP address of the default gateway.  
Contact your system administrator for more information.
- 8** Click **OK**.
- 9** Click **Reset** (under **Administration** menu) to save your configuration.

### *7.6.1.3 Obtaining a Multi-Cell License (Primary)*

To configure a KIRK Wireless Server 600v3 Multi-cell solution it is necessary to obtain a multi-cell license from [www.kirktelecom.com](http://www.kirktelecom.com).

- 1** Under the **Configuration** menu, click **General**, and then copy the serial number of the KIRK Wireless Server 600v3 from the **Info** page.
- 2** Contact KIRK telecom sales support by e-mail ([mph@kirktelecom.com](mailto:mph@kirktelecom.com) or [hbk@kirktelecom.com](mailto:hbk@kirktelecom.com)) and require a multi-cell license for the KIRK Wireless Server 600v3.

**Note:** Remember to write/paste the serial number of the KIRK Wireless Server 600v3 in the e-mail.

- 3** You will now receive an e-mail containing a text file with the multi-cell license.  
Save this file. The text file is to be uploaded to the system.

- 4 Under the **Configuration** menu, click **General**, and then click **License**.

**Figure 47** Adm. Page: Configuration/General/License page

## KIRK Wireless Server 600/3

Configuration		Info	Admin	License	Update	NTP	HTTP Server	HTTP Client	Logging	SNMP	Telnet	
General												
IP												
ETH0												
ETH1												
LDAP												
DECT												
Administration												
DECT												
Download												
Upload												
Diagnostics												
Reset												

Type	Name
Dect	Multicell=35,00-90-33-0f-03-10/10025714740,47791,KIRK-telecom,Langmarksvej-34-8700-Horsens

download all  
delete all

File:

- 5 Click **Browse** to search for the text file containing license information, select it, and then click **Open**.
- 6 Click **Upload** to upload the file.
- 7 Click either **Reset Immediately** or **Idle Reset**.

When resetting the KIRK Wireless Server 600v3 immediately, all calls are terminated and the KIRK Wireless Server 600v3 is reset. When resetting the KIRK Wireless Server 600v3 when the system is idle, the reset is done when there are no active calls in the KIRK Wireless Server 600v3.

- 8 Click the **License** menu again to check that the file has been uploaded.

#### 7.6.1.4 Configuring Ethernet Link (Primary)

- 1 Under the **Configuration** menu, click **ETH0**, and then click **Link**.

**Figure 48** Adm. Page: Configuration/ETH0/Link page

### KIRK Wireless Server 600/3

The screenshot shows the administration interface for the KIRK Wireless Server 600/3. On the left is a navigation menu with sections: Configuration (General, IP, ETH0, ETH1, LDAP, DECT), Administration (DECT, Download, Upload, Diagnostics, Reset). The 'Link' tab is selected under the 'Configuration' section. The main content area shows 'Link' set to 'auto' in a dropdown menu, with 'State=down' and 'Autoneg=incomplete' displayed next to it. An 'OK' button is visible below the dropdown.

- 2 From the **Link** list, select **auto**, and then click **OK**.  
When selecting **auto**, the link speed will be determined by the network switch.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.1.5 Setting LDAP Mode (Primary)

For the Master (Primary) KIRK Wireless Server 600v3 to act as a server for all the KIRK Wireless Server 600v3 secondaries, you need to set the LDAP (Lightweight Directory Access Protocol) mode.

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Server**.

**Figure 49** Adm. Page: Configuration/LDAP/Server page

## KIRK Wireless Server 600/3

The screenshot shows the administration interface for the KIRK Wireless Server 600/3. On the left is a navigation menu with sections: Configuration (General, IP, ETH0, ETH1, LDAP, DECT) and Administration (DECT, Download, Upload, Diagnostics, Reset). The 'LDAP' option is selected. The main area has tabs for 'Server', 'Server-Status', 'Replicator', and 'Replicator-Status'. The 'Server' tab is active, displaying a dialog box with three columns: 'User', 'Password', and 'Write Access'. The 'User' column contains 'ldap-guest' and 'admin'. The 'Password' column contains masked passwords. The 'Write Access' column has checkboxes, with the 'admin' row checked. 'OK' and 'Cancel' buttons are at the bottom.

User	Password	Write Access
ldap-guest	.....	<input type="checkbox"/>
admin	.....	<input checked="" type="checkbox"/>

- 2 In the **User** field, type the user name.
- 3 In the **Password** field, type the password.

**Note:** User name and password must be the same as for the Master (Primary) KIRK Wireless Server 600v3.

- 4 Select the **Write Access** check box.
- 5 Click **OK**.
- 6 Click **Reset** (under **Administration** menu) to save your configuration.



### 7.6.1.6 Setting LDAP Replicator (Primary)

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Replicator**.

**Figure 50** Adm. Page: Configuration/LDAP/Replicator page

## KIRK Wireless Server 600/3

Configuration	Server	Server-Status	Replicator	Replicator-Status
<b>General</b>				
IP				
ETH0				
ETH1				
<b>LDAP</b>				
DECT				
<b>Administration</b>				
DECT				
Download				
Upload				
Diagnostics				
Reset				

Server	<input type="text" value="172.18.2.135"/>
Alt. Server	<input type="text" value="0.0.0.0"/>
Location	<input type="text"/>
User	<input type="text" value="admin"/>
Password	<input type="password" value="•••••"/>
Enable	<input checked="" type="checkbox"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

- 2 In the **Server** field, type the IP address of the LDAP server.
- 3 In the **User** field, type the user name.
- 4 In the **Password** field, type the password.
- 5 The **Enable** check box must be selected.
- 6 Click **OK**.
- 7 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.1.7 Configuring DECT System (Primary)

- 1 Under the **Configuration** menu, click **DECT**, and then click **System**.

**Figure 51** Adm. Page: Configuration/DECT/System page

**KIRK Wireless Server 600/3**

Configuration	System	Features	Master	Radio
<b>General</b>				
IP				
ETH0				
ETH1				
LDAP				
<b>DECT</b>				
<b>Administration</b>				
DECT				
Download				
Upload				
Diagnostics				
Reset				

Name	<input type="text" value="DECT"/>
Pwd	<input type="text"/>
	<input type="text"/>
Sys-Mask	<input type="text"/>
AC	<input type="text"/>
Subscriptions	<input type="text" value="Allow Anonymous"/>
Tones	<input type="text" value="EUROPE-PBX"/>
Enbloc Dialing	<input type="checkbox"/>
Local R-Key/Display Handling	<input checked="" type="checkbox"/>
DTMF through RTP channel	<input type="checkbox"/>
Coder	<input type="text" value="G729A"/>
Frame	<input type="text" value="60"/>
Exclusive	<input type="checkbox"/>
SC	<input type="checkbox"/>

- 2 In the **Name** field, the name **MUST ALWAYS** be **DECT**.  
If changing the name, the system cannot operate.
- 3 In the **PDW** (password) field, type the password, and then type it again in the field below.
- 4 From the **Subscriptions** list, select either **Allow Anonymous**, **With User AC only**, or **Disabled**.

**Note:** It is recommended to select **With User AC only**. When subscribing a new handset to the system it is possible to use an authentication code (AC). If you want to use the authentication code, you must select **With User AC only**. For more information about subscription of handsets and authentication codes, refer to [“Subscribing Handsets” on page 162](#).

- 5 From the **Tones** list, select a ring tone.
- 6 If SIP Protocol: Select the **Enbloc Dialing** check box.

The **Enbloc Dialing** check box has to be enabled in a SIP configuration in order for the handset to collect all digits, before passing them on to a call handler for routing.

**Note:** The **Enbloc Dialing** check box is not to be selected, when using H323 Protocol or SKINNY Protocol.

- 7** If H323 Protocol and SKINNY Protocol: Deselect the **Local R-Key/Display Handling** check box.

**Note:** When using SIP Protocol, the **Local R-Key/Display Handling** check box has to be enabled to support supplementary services such as **On hold** and **Call transfer**.

- 8** If SIP Protocol: Select the **DTMF through RTP channel** check box.

The **DTMF through RTP channel** check box has to be enabled if DTMF tones are needed.

**Note:** The **DTMF through RTP channel** check box is not to be selected, when using H323 Protocol or SKINNY Protocol.

- 9** From the **Coder** list, select a voice compression value that matches your telephony infrastructure.

Contact your system administrator for more information.

- 10** In the **Frame** field, type the desired frame length in milliseconds and then select either **Exclusive** or **SC** (Silence Compression).

Contact your system administrator for more information.

**Note:** If the **Exclusive** check box is selected for the coder, then the KIRK Wireless Server 600v3 is forced to use the coder.

- 11** Click **OK**.

- 12** Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.1.8 Configuring DECT Master (Primary)

On the **Master** page you can define which mode the KIRK Wireless Server 600v3 should operate in. You also establish a communication protocol between the Master KIRK Wireless Server 600v3 and a call handler.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

**Figure 52** Adm. Page: Configuration/DECT/Master page

**KIRK Wireless Server 600/3**

Configuration | System | Features | **Master** | Radio

**General**

IP

ETH0

ETH1

LDAP

**DECT**

**Administration**

DECT

Download

Upload

Diagnostics

Reset

Mode: Active

GK:

Alt-GK:

GK-Id:

Prot: H323

OK Cancel

- 2 From the **Mode** list, select **Active**. Selecting **Active** defines the KIRK Wireless Server 600v3 as a Primary (Master).
- 3 In the **GK** (Gate Keeper) field, type the IP address of your call handler.  
Contact your system administrator for more information.
- 4 In the **Alt-GK** (Alternative Gate Keeper) field, type an alternative IP address of your call handler (optionally).  
Contact your system administrator for more information.
- 5 From the **Prot** (Protocol) list, select either **H323**, **SIP** or **SKINNY** depending on the protocol you are using.
- 6 Click **OK**.
- 7 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.1.9 Configuring DECT Radio (Primary)

On the **Radio** page you define which radio ID the Master KIRK Wireless Server 600v3 and Sync Master has to synchronize with.

**Note:** In a multi-cell installation with max. 10 KIRK Wireless Server primary and secondaries, the Master KIRK Wireless Server 600v3 and the Sync Master can be the same.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

**Figure 53** Adm. Page: Configuration/DECT/Radio page

## KIRK Wireless Server 600/3

Configuration	System	Features	Master	Radio
<b>General</b>				
IP				
ETH0				
ETH1				
LDAP				
<b>DECT</b>				
<b>Administration</b>				
DECT				
Download				
Upload				
Diagnostics				
Reset				

Disable

Master

Alt-Master

Radio-Id

Sync-Source

Alt-Sync-Source

- 2 Select the **Disable** check box to disable the radio.
- 3 In the **Radio-Id** field, type the relevant radio ID for the KIRK Wireless Server600v3 in question. See your synchronization site planner.
- 4 Click **OK**.
- 5 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.1.10 Configuring TOS (Type of Service) Priorities (Primary)

It is possible to change the TOS (Type of Service) priorities in a system. The TOS priority depends on the network used.

- 1 Under the **Configuration** menu, click **IP**.

**Figure 54** Adm. Page: Configuration/IP/Settings page

## KIRK Wireless Server 600/3

The screenshot shows the configuration page for the KIRK Wireless Server 600/3. The left sidebar contains a navigation menu with the following items: Configuration (selected), General, IP (selected), ETH0, ETH1, LDAP, DECT, Administration, DECT, Download, Upload, Diagnostics, and Reset. The main content area is titled 'Settings' and includes tabs for NAT, H.323-NAT, PPP-Config, PPP-State, and Routing. The 'TOS priority' field is set to '0x10'. Below this are sections for 'Port ranges' with fields for 'First UDP-RTP port' and 'Number of ports', and 'First UDP-NAT port' and 'Number of ports'. There are also sections for 'Local Networks' and 'Private Networks', each with 'Address' and 'Mask' fields. At the bottom, there are 'OK' and 'Cancel' buttons.

- 2 In the **TOS priority** field, type a TOS priority.

Depending on the network, it may be necessary to change the TOS priority.

- Most networks: The default TOS priority is: **0x10**
- If CISCO network: It is recommended to change the TOS priority to **0x68,0xb8**.

For information about the TOS priorities used in your network, contact you system administrator.

- 3 Click **Reset** (under **Administration** menu) to save your configuration.

The Master (Primary) KIRK Wireless Server 600v3 is now configured.

## 7.6.2 Configuring Sync Master

This section describes how to configure a Sync Master KIRK Wireless Server 600v3 in a multi-cell solution.

KIRK Wireless Server 600v3 primary and secondaries uses the existing DECT air interface to synchronize to each other on. One KIRK Wireless Server 600v3 is configured as a Sync (synchronization) Master in the system. It is not necessary to configure what KIRK Wireless Server 600v3 the Sync Master should synchronize to.

This section includes information about:

- “Assigning a Specific IP Address (Sync Master)” on page 103
- “Configuring LDAP Replicator (Sync Master)” on page 105
- “Configuring DECT Master (Sync Master)” on page 106
- “Configuring DECT Radio (Sync Master)” on page 107

For information on accessing the web based Administration Page, refer to “Accessing the Web Based Administration Page” on page 75.

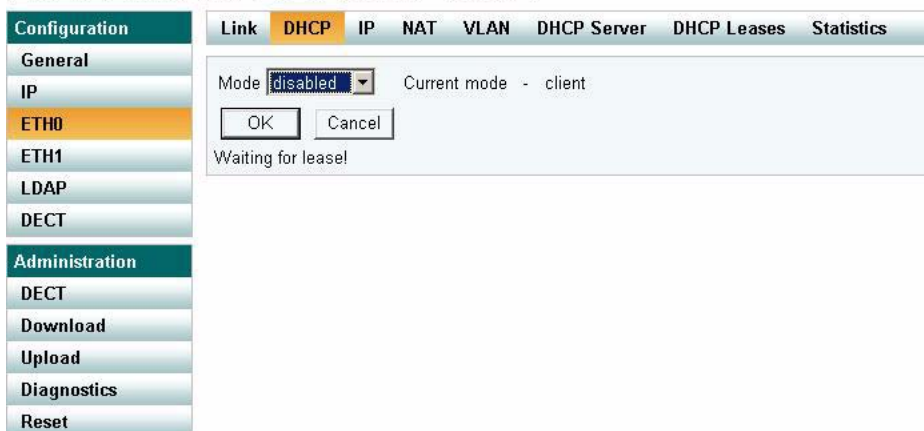
### 7.6.2.1 Assigning a Specific IP Address (Sync Master)

To assign a specific IP address to the KIRK Wireless Server 600v3, it is necessary to disable the DHCP mode and then assign a specific IP address to the KIRK Wireless Server 600v3. The new IP address and network address will be provided by the system administrator.

- 1 Under the **Configuration** menu, click **ETH0**, and then click **DHCP**.

**Figure 55** Adm. Page: Configuration/ETH0/DHCP page

### KIRK Wireless Server 600/3



- 2 From the **Mode** list, select **Disabled**, and then click **OK**.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.

- Under the **Configuration** menu, click **ETH0**, and then click **IP**.

**Note:** It is necessary to use the ETH0 port when integrating the KIRK Wireless Server 600v3 on the local network.

**Figure 56** Adm. Page: Configuration/ETH0/IP page

## KIRK Wireless Server 600/3

Configuration	Link	DHCP	IP	NAT	VLAN	DHCP Server	DHCP Leases	Statistics
General								
IP								
<b>ETH0</b>								
ETH1								
LDAP								
DECT								
Administration								
DECT								
Download								
Upload								
Diagnostics								
Reset								

IP address	<input type="text" value="192.168.0.1"/>
Network mask	<input type="text" value="255.255.255.0"/>
Default gateway	<input type="text"/>
DNS server	<input type="text"/>
Proxy ARP	<input type="checkbox"/>
Multicast	<input checked="" type="checkbox"/>
Routes	
<b>Network destination</b>	<b>Network mask</b>
<input type="text"/>	<input type="text"/>
<b>Gateway</b>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="button" value="OK"/>	<input type="button" value="Cancel"/>

- In the **IP address** field, type the new IP address.

The new IP address is now the default address when accessing the KIRK Wireless Server 600v3.

- In the **Network mask** field, type a new network mask.
- In the **Default gateway** field, type the IP address of the default gateway.  
Contact your system administrator for more information.
- Click **OK**.
- Click **Reset** (under **Administration** menu) to save your configuration.



### 7.6.2.2 Configuring LDAP Replicator (Sync Master)

In a KIRK Wireless Server 600v3 Multi-cell solution the Sync Master needs access to the information (such as system ARI code and user data) that are stored on the Master KIRK Wireless Server 600v3/LDAP Server. Therefore, it is necessary to activate the LDAP replicator services for the Sync Master.

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Replicator**.

**Figure 57** Adm. Page: Configuration/LDAP/Replicator page

**KIRK Wireless Server 600/3**

Configuration	Server	Server-Status	Replicator	Replicator-Status
<b>General</b>				
IP	Server	172.18.2.135		
ETH0	Alt. Server	0.0.0.0		
ETH1	Location			
<b>LDAP</b>	User	admin		
DECT	Password	••••••		
<b>Administration</b>	Enable	<input checked="" type="checkbox"/>		
DECT	<input type="button" value="OK"/> <input type="button" value="Cancel"/>			
Download				
Upload				
Diagnostics				
Reset				

- 2 In the **Server** field, type the IP address of the LDAP Server
- 3 In the **User** field, type the user name.
- 4 In the **Password** field, type the password.

**Note:** User name and password must be the same as for the Master (Primary) KIRK Wireless Server 600v3.

- 5 Select the **Enable** check box.
- 6 Click **OK**.
- 7 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.2.3 Configuring DECT Master (Sync Master)

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

**Figure 58** Adm. Page: Configuration/DECT/Master page

## KIRK Wireless Server 600/3

The screenshot shows the configuration page for the KIRK Wireless Server 600/3. On the left is a navigation menu with two main sections: 'Configuration' and 'Administration'. Under 'Configuration', options include General, IP, ETH0, ETH1, LDAP, DECT (which is highlighted in orange), and Radio. Under 'Administration', options include DECT, Download, Upload, Diagnostics, and Reset. The main content area has tabs for 'System', 'Features', 'Master' (which is selected and highlighted in orange), and 'Radio'. The 'Master' tab contains the following fields: 'Mode' (a dropdown menu set to 'Off'), 'GK' (a text input field), 'Alt-GK' (a text input field), 'GK-Id' (a text input field), and 'Prot' (a dropdown menu set to 'H323'). At the bottom of the form are 'OK' and 'Cancel' buttons.

- 2 From the **Mode** list, select **Off**. Selecting **Off** defines the KIRK Wireless Server 600v3 as not being the Master.
- 3 From the **Prot** (Protocol) list, select **H323**.
- 4 Click **OK**.
- 5 Click **Reset** (under **Administration** menu) to save your configuration.

#### 7.6.2.4 Configuring DECT Radio (Sync Master)

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

**Figure 59** Adm. Page: Configuration/DECT/Radio page

### KIRK Wireless Server 600/3

The screenshot shows the administration interface for a KIRK Wireless Server 600/3. On the left is a navigation menu with two main sections: 'Configuration' and 'Administration'. Under 'Configuration', there are links for General, IP, ETH0, ETH1, LDAP, DECT (which is highlighted in orange), and Administration. Under 'Administration', there are links for DECT, Download, Upload, Diagnostics, and Reset. The main content area has a tabbed interface with 'System', 'Features', 'Master', and 'Radio' tabs. The 'Radio' tab is active. It contains a 'Disable' checkbox, a 'Master' text field with the value '172.18.2.100', an 'Alt-Master' text field, a 'Radio-Id' text field with the value '1', a 'Sync-Source' text field, and an 'Alt-Sync-Source' text field. At the bottom of the form are 'OK' and 'Cancel' buttons.

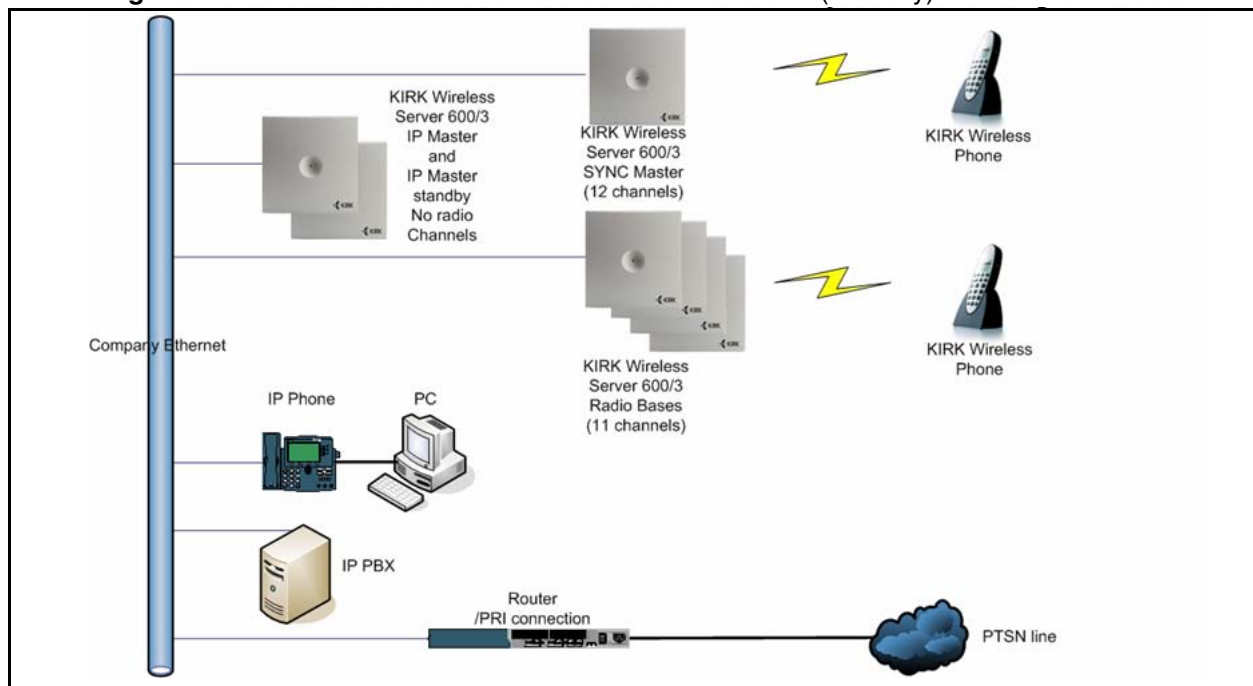
- 2 In the **Master** field, type the IP address of the Master (Primary) KIRK Wireless Server 600v3.
- 3 In the **Radio-id** field, type the radio ID of the Sync Master.
- 4 Click **OK**.
- 5 Click **Reset** (under **Administration** menu) to save your configuration.  
The Sync Master is now configured.

### 7.6.3 Configuring the Alternative Master KIRK Wireless Server 600v3

This section describes how to configure an alternative (Standby) Master KIRK Wireless Server 600v3 in a multi-cell solution. In case the Master KIRK Wireless Server 600v3 stops working, the alternative (Standby) Master KIRK Wireless Server 600v3 will take over connection to the call handler.

**Note:** Configuring an alternative Master KIRK Wireless Server 600v3 is optionally - and only recommended - if you have a very large multi-cell installation (number of KIRK Wireless Server 600v3 and/or handsets).

**Figure 60** KWS600v3 Multi-cell installation with Alternative (Standby) Master



For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page”](#) on page 75.

This section contains information about:

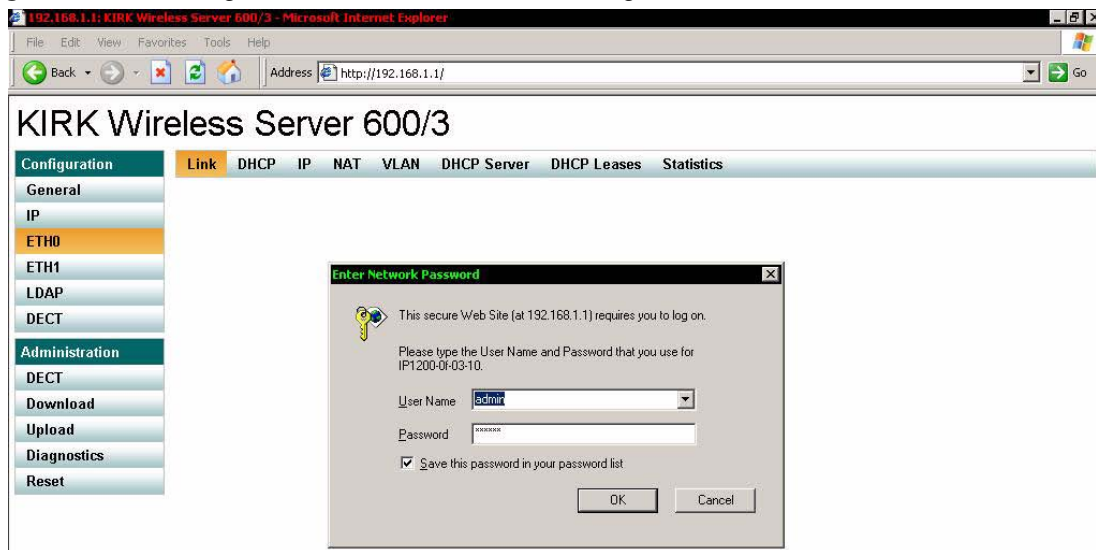
- [“Entering a User Name and Password \(Standby\)”](#) on page 109
- [“Assigning a Specific IP Address \(Standby\)”](#) on page 110
- [“Configuring Ethernet Link \(Standby\)”](#) on page 111
- [“Configuring DECT Master \(Standby\)”](#) on page 112
- [“Configuring DECT Radio \(Standby\)”](#) on page 113

### 7.6.3.1 Entering a User Name and Password (Standby)

First time you access the Administration Page, you need to log on with user name and a password.

**Note:** In a KIRK Wireless Server 600v3 Multi-cell solution, all primary and secondary KIRK Wireless Server 600v3 must have the same password. The default user name of the system is **admin** and the default password of the system is **ip1200**. If you have changed the user name and password when configuring the Master (Primary) KIRK Wireless Server 600v3, you must use these when configuring the alternative Master (Standby) KIRK Wireless Server 600v3 and KIRK Wireless Server 600v3 secondaries.

**Figure 61** Adm. Page: Enter Network Password dialog box



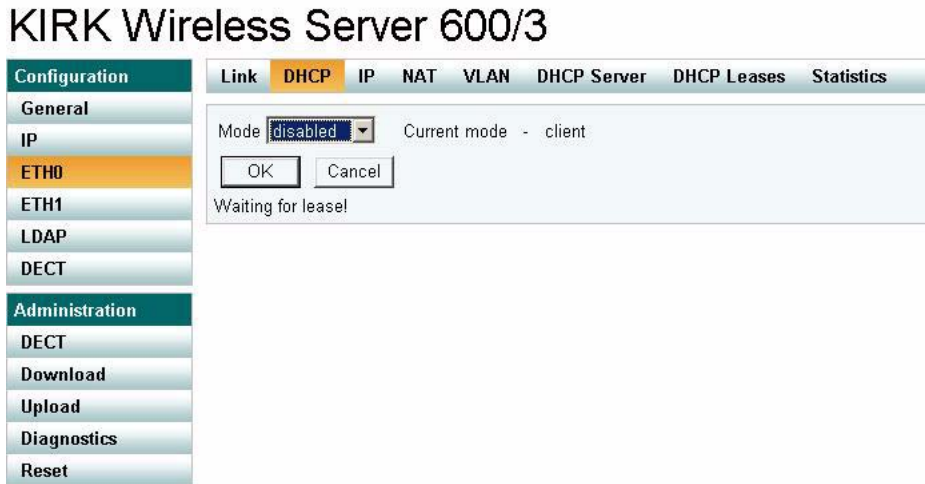
- 1 In the **User Name** field, type the user name.
- 2 In the **Password** field, type the password.
- 3 Click **OK**.

### 7.6.3.2 Assigning a Specific IP Address (Standby)

To assign a specific IP address to the KIRK Wireless Server 600v3, it is necessary to disable the DHCP mode and then assign a specific IP address to the KIRK Wireless Server 600v3. The new IP address and network address will be provided by the system administrator.

- 1 Under the **Configuration** menu, click **ETH0**, and then click **DHCP**.

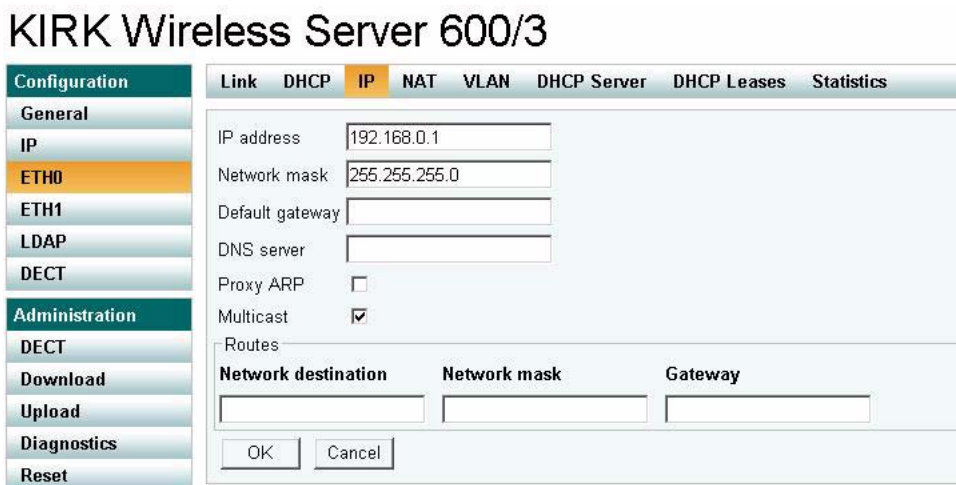
**Figure 62** Adm. Page: Configuration/ETH0/DHCP page



- 2 From the **Mode** list, select **Disabled**, and then click **OK**.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.
- 4 Under the **Configuration** menu, click **ETH0**, and then click **IP**.

**Note:** It is necessary to use the ETH0 port when integrating the KIRK Wireless Server 600v3 on the local network.

**Figure 63** Adm. Page: Configuration/ETH0/IP page



- 5 In the **IP address** field, type the new IP address.  
The new IP address is now the default address when accessing the KIRK Wireless Server 600v3.
- 6 In the **Network mask** field, type a new network mask.
- 7 In the **Default gateway** field, type the IP address of the default gateway.  
Contact your system administrator for more information.
- 8 Click **OK**.
- 9 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.3.3 Configuring Ethernet Link (Standby)

- 1 Under the **Configuration** menu, click **ETH0**, and then click **Link**.

**Figure 64** Adm. Page: Configuration/ETH0/Link page

## KIRK Wireless Server 600/3

Configuration	Link	DHCP	IP	NAT	VLAN	DHCP Server	DHCP Leases	Statistics
General	Link: auto							
IP	State=down Autoneg=incomplete							
<b>ETH0</b>	OK							
ETH1								
LDAP								
DECT								
Administration								
DECT								
Download								
Upload								
Diagnostics								
Reset								

- 2 From the **Link** list, select **auto**, and then click **OK**.  
When selecting **auto**, the link speed will be determined by the network switch.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.3.4 Configuring DECT Master (Standby)

On the **Master** page you need to define the KIRK Wireless Server 600v3 as an alternative (Standby) Master KIRK Wireless Server 600v3.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

**Figure 65** Adm. Page: Configuration/DECT/Master page

## KIRK Wireless Server 600/3

Configuration	System	Features	Master	Radio
General				
IP				
ETH0				
ETH1				
LDAP				
<b>DECT</b>				
Administration				
DECT				
Download				
Upload				
Diagnostics				
Reset				

Mode	Standby
GK	172.18.2.100
Alt-GK	
GK-Id	
Prot	H323
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

- 2 From the **Mode** list, select **Standby**. Selecting **Standby** defines the KIRK Wireless Server 600v3 as an alternative Master (Standby).
- 3 Check that the settings for **GK** (Gate Keeper - Primary call handler), **Alt-GK** (Alternative Gate Keeper - Secondary call handler) and **Prot** (Protocol) are identical to the settings for the Master (Primary) KIRK Wireless Server 600v3.
- 4 Click **OK**.
- 5 Click **Reset** (under **Administration** menu) to save your configuration.



### 7.6.3.5 Configuring DECT Radio (Standby)

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

**Figure 66** Adm. Page: Configuration/DECT/Radio page

## KIRK Wireless Server 600/3

Configuration	System	Features	Master	Radio
General				
IP				
ETH0				
ETH1				
LDAP				
<b>DECT</b>				
Administration				
DECT				
Download				
Upload				
Diagnostics				
Reset				

Disable	<input checked="" type="checkbox"/>
Master	<input type="text" value="127.0.0.1"/>
Alt-Master	<input type="text"/>
Radio-Id	<input type="text"/>
Sync-Source	<input type="text"/>
Alt-Sync-Source	<input type="text"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

- 2 Select the **Disable** check box to disable the radio.
- 3 Click **OK**.
- 4 Click **Reset** (under **Administration** menu) to save your configuration.

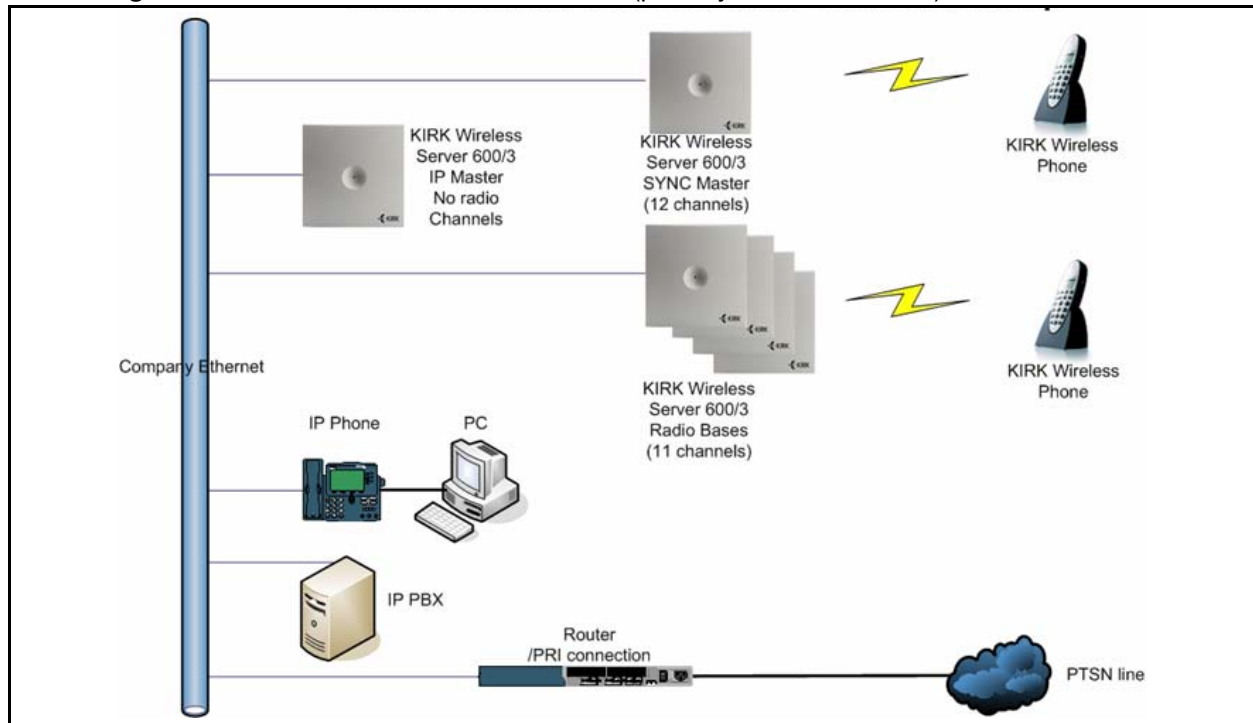
The alternative (Standby) Master KIRK Wireless Server 600v3 is now configured.

### 7.6.4 Configuring the Secondary KIRK Wireless Server 600v3

This section describes how to configure KIRK Wireless Server 600v3 secondaries in a multi-cell solution.

After configuring the Master (Primary) KIRK Wireless Server 600v3, you need to configure each Secondary KIRK Wireless Server 600v3 to be used in the system one by one.

**Figure 67** KWS600v3 Multi-cell installation (primary and secondaries)



For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page”](#) on page 75.

This section contains information about:

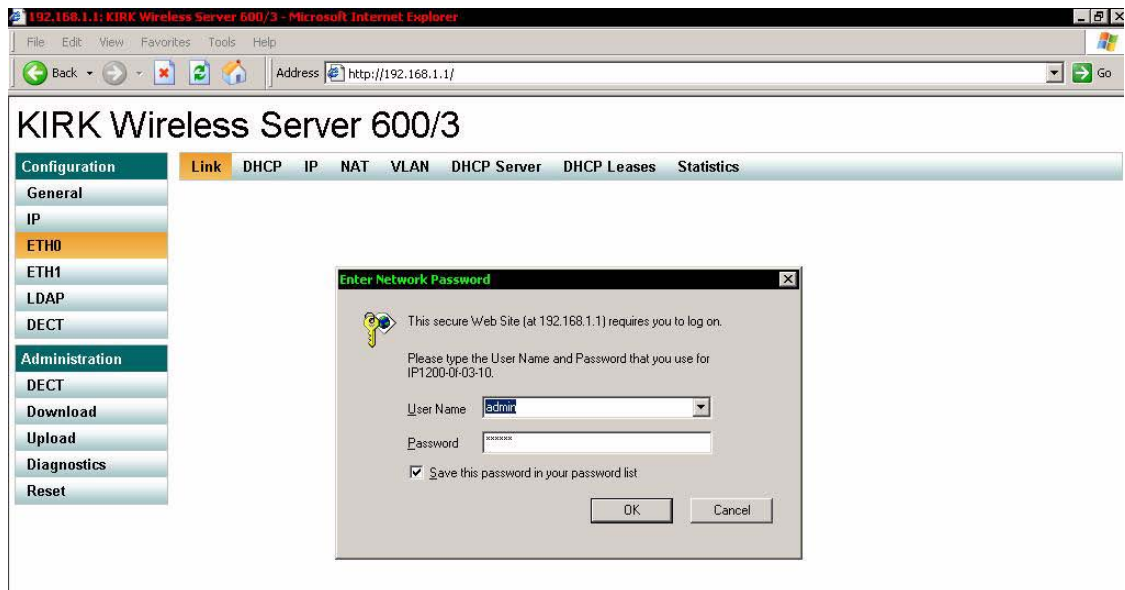
- [“Entering a User Name and Password \(Secondary\)”](#) on page 115
- [“Assigning a Specific IP Address \(Secondary\)”](#) on page 116
- [“Configuring Ethernet Link \(Secondary\)”](#) on page 118
- [“Setting LDAP Replicators \(Secondary\)”](#) on page 119
- [“Configuring DECT System \(Secondary\)”](#) on page 120
- [“Configuring DECT Master \(Secondary\)”](#) on page 121
- [“Configuring DECT Radio \(Secondary\)”](#) on page 122

### 7.6.4.1 Entering a User Name and Password (Secondary)

First time you access the Administration Page, you need to log on with user name and a password.

**Note:** In a KIRK Wireless Server 600v3 Multi-cell solution, all primary and secondary KIRK Wireless Server 600v3 must have the same password. The default user name of the system is **admin** and the default password of the system is **ip1200**. If you have changed the user name and password when configuring the Master (Primary) KIRK Wireless Server 600v3, you must use these when configuring the KIRK Wireless Server 600v3 secondaries.

**Figure 68** Adm. Page: Enter Network Password dialog box



- 1 In the **User Name** field, type the user name.
- 2 In the **Password** field, type the password.
- 3 Click **OK**.

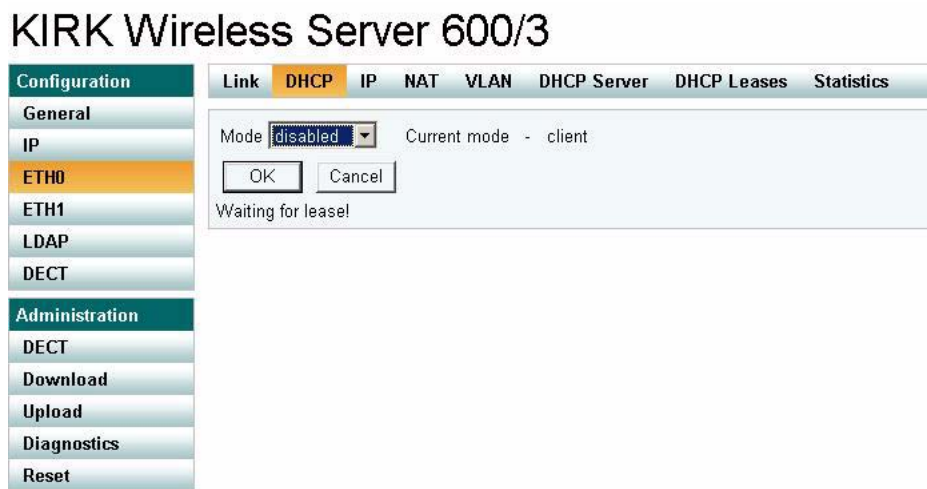
### 7.6.4.2 Assigning a Specific IP Address (Secondary)

To assign a specific IP address to the KIRK Wireless Server 600v3, it is necessary to disable the DHCP mode and then assign a specific IP address to the KIRK Wireless Server 600v3. The new IP address and network address will be provided by the system administrator.

**Note:** It is advisable that the IP addresses for KIRK Wireless Server 600v3 secondaries are numbered in succession; eg. 192.168.1.3, 192.168.1.4, 192.168.1.5 etc. This makes it easier to detect a specific Secondary KIRK Wireless Server 600v3.

- 1 Under the **Configuration** menu, click **ETH0**, and then click **DHCP**.

**Figure 69** Adm. Page: Configuration/ETH0/DHCP page



- 2 From the **Mode** list, select **Disabled**, and then click **OK**.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.
- 4 Under the **Configuration** menu, click **ETH0**, and then click **IP**.

**Note:** It is necessary to use the ETH0 port when integrating the KIRK Wireless Server 600v3 on the local network.

Figure 70 Adm. Page: Configuration/ETH0/IP page

## KIRK Wireless Server 600/3

Configuration	Link	DHCP	IP	NAT	VLAN	DHCP Server	DHCP Leases	Statistics
General								
IP								
<b>ETH0</b>								
ETH1								
LDAP								
DECT								
<b>Administration</b>								
DECT								
Download								
Upload								
Diagnostics								
Reset								

IP address	<input type="text" value="192.168.0.1"/>
Network mask	<input type="text" value="255.255.255.0"/>
Default gateway	<input type="text"/>
DNS server	<input type="text"/>
Proxy ARP	<input type="checkbox"/>
Multicast	<input checked="" type="checkbox"/>
Routes	
<b>Network destination</b>	<b>Network mask</b>
<input type="text"/>	<input type="text"/>
<b>Gateway</b>	<input type="text"/>
<input type="text"/>	<input type="text"/>
<input type="button" value="OK"/>	<input type="button" value="Cancel"/>

- 5 In the **IP address** field, type the new IP address.

The new IP address is now the default address when accessing the KIRK Wireless Server 600v3.

- 6 In the **Network mask** field, type a new network mask.
- 7 In the **Default gateway** field, type the IP address of the default gateway.  
Contact your system administrator for more information.
- 8 Click **OK**.
- 9 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.4.3 Configuring Ethernet Link (Secondary)

- 1 Under the **Configuration** menu, click **ETH0**, and then click **Link**.

**Figure 71** Adm. Page: Configuration/ETH0/Link page

## KIRK Wireless Server 600/3

The screenshot shows the administration interface for the KIRK Wireless Server 600/3. On the left is a navigation menu with sections: Configuration (General, IP, ETH0, ETH1, LDAP, DECT), Administration (DECT, Download, Upload, Diagnostics, Reset). The 'Link' tab is selected in the top navigation bar. The main content area shows 'Link' set to 'auto' in a dropdown menu, with 'State=down' and 'Autoneg=incomplete' displayed below it. An 'OK' button is present at the bottom of the configuration area.

- 2 From the **Link** list, select **auto**, and then click **OK**.  
When selecting **auto**, the link speed will be determined by the network switch.
- 3 Click **Reset** (under **Administration** menu) to save your configuration.

#### 7.6.4.4 Setting LDAP Replicators (Secondary)

In a KIRK Wireless Server 600v3 Multi-cell solution the Secondary KIRK Wireless Server 600v3 needs access to the information (such as system ARI code and user data) that are stored on the Master KIRK Wireless Server 600v3/LDAP Server. Therefore, it is necessary to activate the LDAP replicator services for the Secondary KIRK Wireless Server 600v3.

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Replicator**.

**Figure 72** Adm. Page: Configuration/LDAP/Replicator page

### KIRK Wireless Server 600/3

Configuration	Server	Server-Status	Replicator	Replicator-Status
General	Server			
IP	Alt. Server			
ETH0	Location			
ETH1	User			
LDAP	Password			
DECT	Enable			
Administration	OK			
DECT	Cancel			
Download				
Upload				
Diagnostics				
Reset				

- 2 In the **Server** field, type the IP address of the Master KIRK Wireless Server 600v3 - or the LDAP Server, if this is part of your installation.
- 3 In the **User** field, type the user name.
- 4 In the **Password** field, type the password.

**Note:** The password will be verified against the Master KIRK Wireless Server 600v3.

- 5 Select the **Enable** check box.
- 6 Click **OK**.
- 7 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.4.5 Configuring DECT System (Secondary)

- 1 Under the **Configuration** menu, click **DECT**, and then click **System**.

**Figure 73** Adm. Page: Configuration/DECT/System page

## KIRK Wireless Server 600/3

Configuration	System	Features	Master	Radio
General				
IP	Name	DECT		
ETH0	Pwd			
ETH1				
LDAP	Sys-Mask			
DECT	AC			
Administration	Subscriptions	Allow Anonymous		
DECT	Tones	EUROPE-PBX		
Download	Enbloc Dialing	<input type="checkbox"/>		
Upload	Local R-Key/Display Handling	<input checked="" type="checkbox"/>		
Diagnostics	DTMF through RTP channel	<input type="checkbox"/>		
Reset	Coder	G729A		Frame 60 Exclusive <input type="checkbox"/> SC <input type="checkbox"/>
OK		Cancel		

- 2 In the **Name** field, the name **MUST ALWAYS** be **DECT**.  
If changing the name, the system cannot operate.
- 3 In the **PDW** (password) field, type the password, and then type it again in the field below.
- 4 Click **OK**.
- 5 Click **Reset** (under **Administration** menu) to save your configuration.



### 7.6.4.6 Configuring DECT Master (Secondary)

On the **Master** page you need to define the KIRK Wireless Server 600v3 as a Secondary KIRK Wireless Server 600v3.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

**Figure 74** Adm. Page: Configuration/DECT/Master page

## KIRK Wireless Server 600/3

The screenshot shows the configuration page for the KIRK Wireless Server 600/3. On the left is a navigation menu with sections: Configuration (General, IP, ETH0, ETH1, LDAP, DECT), Administration (DECT, Download, Upload, Diagnostics, Reset). The DECT section is selected. The main area has tabs for System, Features, Master, and Radio. The Master tab is active, showing fields for Mode (set to Off), GK, Alt-GK, GK-Id, and Prot (set to H323). There are OK and Cancel buttons at the bottom.

- 2 From the **Mode** list, select **Off**. Selecting **Off** defines the KIRK Wireless Server 600v3 as a Secondary.
- 3 Check that the protocol **H323** is selected from the **Prot** (Protocol) list.

**Note:** The **H323** Protocol is always used for internal communication between KIRK Wireless Server 600v3 secondaries, regardless of the protocol used in the Master KIRK Wireless Server 600v3.

- 4 Click **OK**.
- 5 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.4.7 Configuring DECT Radio (Secondary)

On the Radio page you define which radio ID the Master KIRK Wireless Server 600v3 and Sync Master has to synchronize with.

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

**Figure 75** Adm. Page: Configuration/DECT/Radio page

## KIRK Wireless Server 600/3

Configuration	System	Features	Master	Radio
<b>General</b>	Disable		<input type="checkbox"/>	
IP	Master		172.18.2.100	
ETH0	Alt-Master			
ETH1	Radio-Id		1	
LDAP	Sync-Source			
<b>DECT</b>	Alt-Sync-Source			
<b>Administration</b>	<input type="button" value="OK"/> <input type="button" value="Cancel"/>			
DECT				
Download				
Upload				
Diagnostics				
Reset				

- 2 In the **Master** field, type the IP address of the Master KIRK Wireless Server 600v3.
- 3 In the **Radio-Id** field, type the radio ID number of the KIRK Wireless Server 600v3. The radio ID can be a number between 0 and 255. See your site planner.

**Note:** It is advisable to make the IP address numbering of a Secondary KIRK Wireless Server 600v3 identical with the radio ID number of the unit in question, eg.:

- IP address 192.168.1.3/Radio ID 3
- IP address 192.168.1.4/Radio ID 4
- IP address 192.168.1.5/Radio ID 5

- 4 In the **Sync-Source** field, type the radio ID of the KIRK Wireless Server 600v3, you want to synchronize on. See your site planner.
- 5 In the **Alt-Sync-Source** field, type the radio ID of the KIRK Wireless Server 600v3, you want to synchronize on. See your site planner.
- 6 Click **OK**.

- 7 Click **Reset** (under **Administration** menu) to save your configuration.

The Secondary KIRK Wireless Server 600v3 is now configured.

**Note:** When configuring more KIRK Wireless Server 600v3 secondaries, it is possible to make a backup of the configuration file of the first configured Secondary KIRK Wireless Server 600v3. This configuration file can be used as input to configure the rest of the KIRK Wireless Server 600v3 secondaries. For more information about making a backup of a configuration file, refer to [“Updating Configuration File” on page 185](#). For more information about configuring KIRK Wireless Server 600v3 secondaries using a backup configuration file of another Secondary KIRK Wireless Server 600v3 as input, refer to [“Configuring Secondary KIRK Wireless Server 600v3 Using a Back-Up File” on page 123](#).

### 7.6.5 Configuring Secondary KIRK Wireless Server 600v3 Using a Back-Up File

A previously saved configuration file can be loaded to the KIRK Wireless Server 600v3 and used as input for configuration.

**Note:** For more information about configuring the first Secondary KIRK Wireless Server 600v3 to be used as input in the configuration of more KIRK Wireless Server 600v3 secondaries, refer to [“Configuring the Secondary KIRK Wireless Server 600v3” on page 114](#). For more information about making a backup of a configuration file, refer to [“Updating Configuration File” on page 185](#).

- 1 Upload the configuration file to the KIRK Wireless Server 600v3 secondary in question.  
For more information about updating the configuration file, refer to [“Updating Configuration File” on page 185](#).
- 2 Change the IP address.  
For more information about changing the IP address, refer to [“Assigning a Specific IP Address \(Secondary\)” on page 116](#).
- 3 Change radio ID.  
For more information about changing the radio ID, refer to [“Configuring DECT Radio \(Secondary\)” on page 122](#).
- 4 Change Primary Sync ID.  
For more information about changing the Primary Sync ID, refer to [“Configuring DECT Radio \(Secondary\)” on page 122](#).
- 5 Change alternative Sync ID.  
For more information about changing the alternative Sync ID, refer to [“Configuring DECT Radio \(Secondary\)” on page 122](#).
- 6 Click **Reset** to save your configuration.

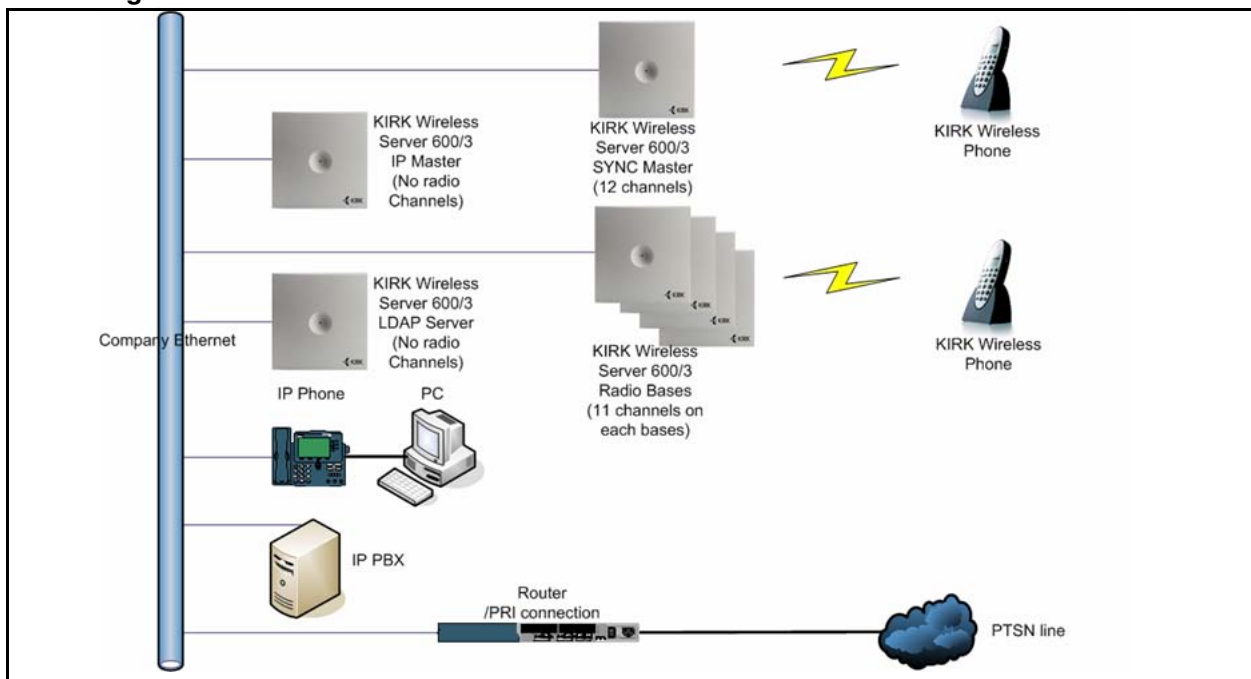
## 7.6.6 Configuring Standalone LDAP Server

In a KIRK Wireless Server 600v3 Multi-cell solution it is possible to configure an LDAP Server to handle all handset/user registration data (such as name, directory number, IPEI etc.).

If you configure an LDAP Server to handle all handset/user registration and read/write information between the primaries and secondaries of a KIRK Wireless Server 600v3 solution, then the Master KIRK Wireless Server 600v3 only manage the connection to the call handler.

**Note:** Configuring an LDAP Server is only recommended in very large multi-cell installations (more than 500-600 handsets).

**Figure 76** KWS600v3 Multi-cell installation with LDAP Server



This section contains information about:

- [“Setting LDAP Mode \(LDAP Server\)”](#) on page 125
- [“Configuring DECT Master \(LDAP Server\)”](#) on page 125
- [“Configuring DECT Radio \(LDAP Server\)”](#) on page 126

### 7.6.6.1 Setting LDAP Mode (LDAP Server)

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Server**.

**Figure 77** Adm. Page: Configuration/LDAP/Server page

## KIRK Wireless Server 600/3

Configuration	Server	Server-Status	Replicator	Replicator-Status
General				
IP				
ETH0				
ETH1				
<b>LDAP</b>				
DECT				
Administration				
DECT				
Download				
Upload				
Diagnostics				
Reset				

User	Password	Write Access
ldap-guest	•••••	<input type="checkbox"/>
admin	•••••	<input checked="" type="checkbox"/>

OK Cancel

- 2 In the **User** field, type the user name.
- 3 In the **Password** field, type the password.
- 4 Select the **Write Access** check box.
- 5 Click **OK**.
- 6 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.6.2 Configuring DECT Master (LDAP Server)

- 1 Under the **Configuration** menu, click **DECT**, and then click **Master**.

**Figure 78** Adm. Page: Configuration/DECT/Master page

## KIRK Wireless Server 600/3

Configuration	System	Features	Master	Radio
General				
IP				
ETH0				
ETH1				
LDAP				
<b>DECT</b>				
Administration				
DECT				
Download				
Upload				
Diagnostics				
Reset				

Mode	Off
GK	
Alt-GK	
GK-Id	
Prot	H323

OK Cancel

- 2 From the **Mode** list, select **Off**.
- 3 Click **OK**.
- 4 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.6.3 Configuring DECT Radio (LDAP Server)

- 1 Under the **Configuration** menu, click **DECT**, and then click **Radio**.

**Figure 79** Adm. Page: Configuration/DECT/Radio page

The screenshot shows the configuration page for the KIRK Wireless Server 600/3. The page title is "KIRK Wireless Server 600/3". The navigation menu on the left includes "Configuration", "General", "IP", "ETH0", "ETH1", "LDAP", "DECT" (highlighted), "Administration", "DECT", "Download", "Upload", "Diagnostics", and "Reset". The "Radio" tab is selected in the top navigation bar. The configuration fields are: "Disable" (checked), "Master" (127.0.0.1), "Alt-Master" (empty), "Radio-Id" (empty), "Sync-Source" (empty), and "Alt-Sync-Source" (empty). There are "OK" and "Cancel" buttons at the bottom.

- 2 Select the **Disable** check box to disable the radio.
- 3 Click **OK**.
- 4 Click **Reset** (under **Administration** menu) to save your configuration.

The LDAP Server is now configured.

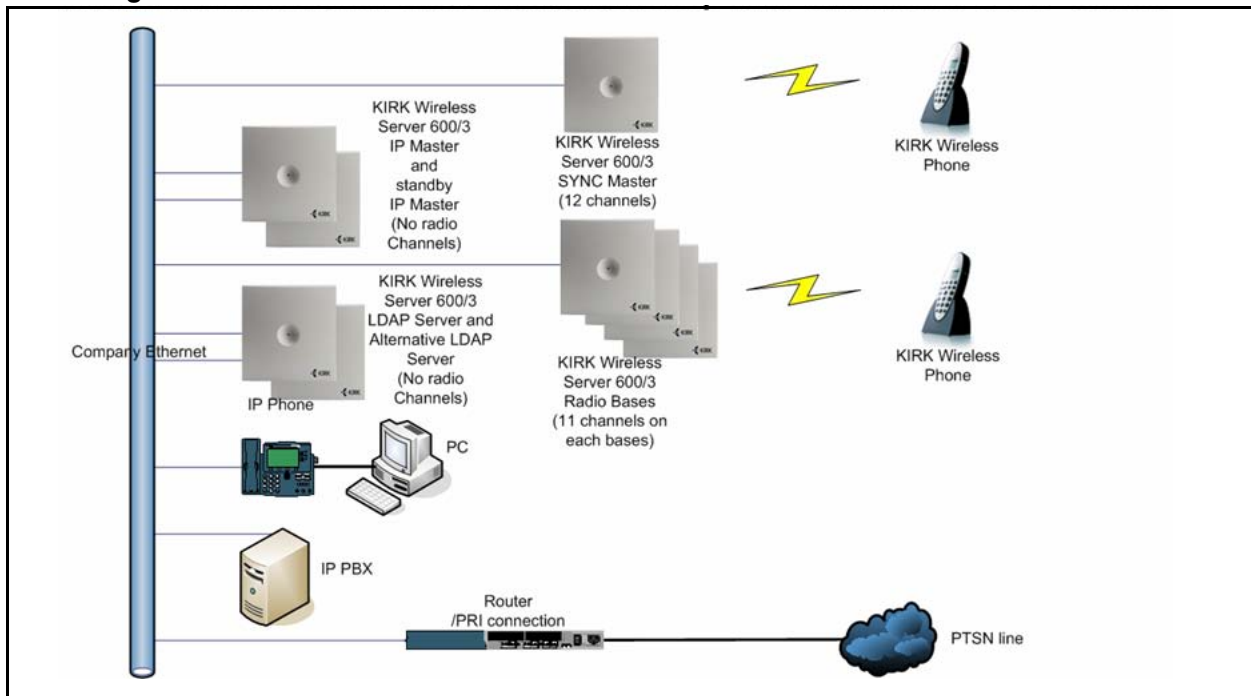
### 7.6.7 Configuring Alternative LDAP Server

Working with LDAP Servers, you can also define a KIRK Wireless Server 600v3 to be an alternative LDAP Server. In case the LDAP Server stops working, the alternative LDAP Server will take over the LDAP Replication to the radio units.

**Note:** In case the Master KIRK Wireless Server 600v3 and the LDAP Server is the same unit, the alternative LDAP Server will also take the role as the Master KIRK Wireless Server if the LDAP Server stops working.

**Note:** The alternative LDAP Server can be used as the alternative (Standby) Master KIRK Wireless Server. This configuration is not recommended if the installation requires an LDAP Server.

**Figure 80** KWS600v3 Multi-cell installation with Alternative LDAP Server



This section contains information about:

- [“Setting LDAP Mode \(Alt. LDAP Server\)” on page 128](#)
- [“Setting LDAP Replicator \(Alt. LDAP Server\)” on page 128](#)

### 7.6.7.1 Setting LDAP Mode (Alt. LDAP Server)

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Server**.

**Figure 81** Adm. Page: Configuration/LDAP/Server page

## KIRK Wireless Server 600/3

Configuration	Server	Server-Status	Replicator	Replicator-Status
<b>General</b>				
IP				
ETH0				
ETH1				
<b>LDAP</b>				
DECT				
<b>Administration</b>				
DECT				
Download				
Upload				
Diagnostics				
Reset				

User	Password	Write Access
ldap-guest	•••••	<input type="checkbox"/>
admin	•••••	<input checked="" type="checkbox"/>

OK Cancel

- 2 In the **User** field, type the user name.
- 3 In the **Password** field, type the password.
- 4 Select the **Write Access** check box.
- 5 Click **OK**.
- 6 Click **Reset** (under **Administration** menu) to save your configuration.

### 7.6.7.2 Setting LDAP Replicator (Alt. LDAP Server)

In a KIRK Wireless Server 600v3 Multi-cell solution the alternative LDAP Server needs access to the information (such as system ARI code and user data) that are stored on the Master KIRK Wireless Server 600v3/LDAP Server. Therefore, it is necessary to activate the LDAP replicator services for the alternative LDAP Server.



- 1 Under the **Configuration** menu, click **LDAP**, and then click **Replicator**.

**Figure 82** Adm. Page: Configuration/LDAP/Replicator page

## KIRK Wireless Server 600/3

Configuration	Server	Server-Status	Replicator	Replicator-Status
<b>General</b>				
IP				
ETH0				
ETH1				
<b>LDAP</b>				
DECT				
<b>Administration</b>				
DECT				
Download				
Upload				
Diagnostics				
Reset				

Server	<input type="text" value="172.18.2.135"/>
Alt. Server	<input type="text" value="0.0.0.0"/>
Location	<input type="text"/>
User	<input type="text" value="admin"/>
Password	<input type="password" value="•••••"/>
Enable	<input checked="" type="checkbox"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

- 2 In the **Server** field, type the IP address of the LDAP Server.
- 3 In the **User name** field, type the user name.
- 4 In the **Password** field, type the password.
- 5 Select the **Enable** check box.
- 6 Click **OK**.
- 7 Click **Reset** (under **Administration** menu) to save your configuration.  
The alternative LDAP Server is now configured.

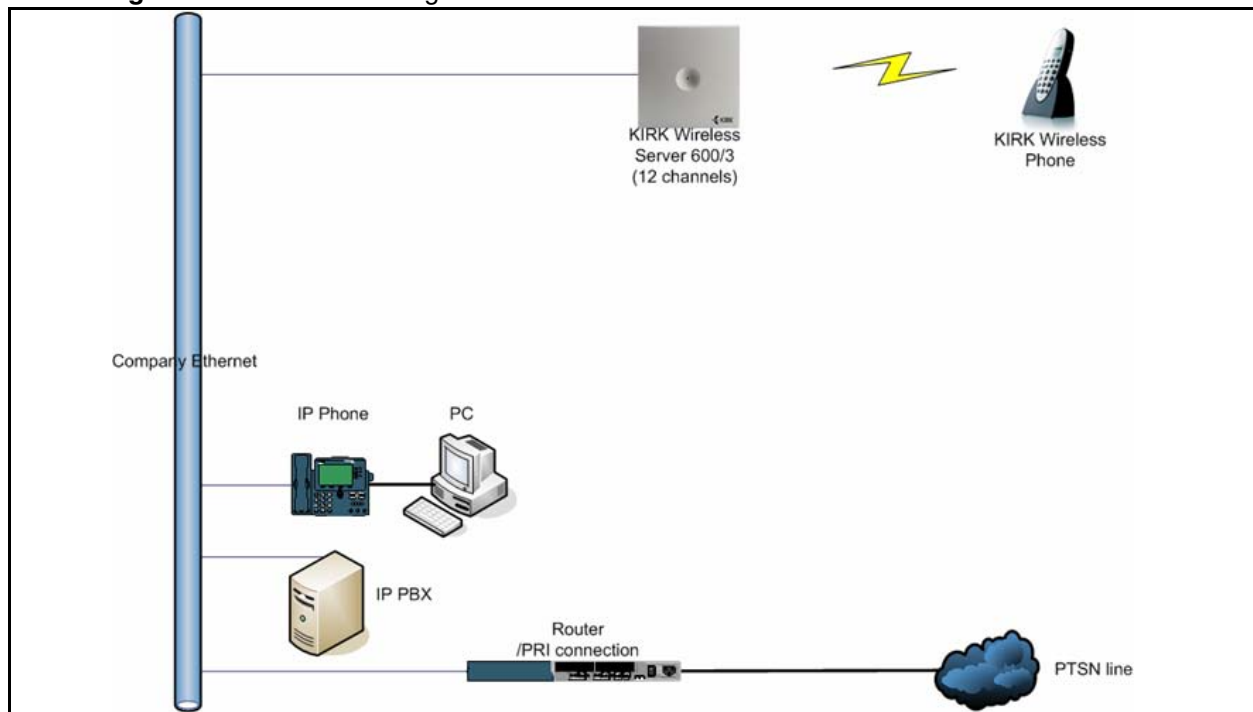
## 7.7 Configuring Single-Cell Solution through KIRK Configuration Tool

**Note:** Using the KIRK Configuration Tool is recommended when configuring medium-sized to large installations. It is possible, though, to use the KIRK Configuration Tool for single-cell configuration as well.

For information on accessing the KIRK Configuration Tool, refer to [“Accessing the KIRK Configuration Tool”](#) on page 77.

This section describes how to configure a KIRK Wireless Server 600v3 Single-cell solution.

**Figure 83** KWS600v3 Single-cell installation



In the **Master** tab you configure the KIRK Wireless Server 600v3. This is only a single-cell configuration, therefore you do not need to provide information about LDAP and multi-cell license.

**Figure 84** KIRK Configuration Tool: Master tab

The screenshot shows the 'KIRK Configuration Tool for KWS600v3' window with the 'Master' tab selected. The interface is divided into several sections:

- IP Address:** DHCP is unchecked. IP Address is 172.18.2.100, Network Mask is 255.255.0.0, Default Gateway is 172.18.0.1, and Host Name is IP1200-0f-00-9d with a 'Get' button.
- System:** AC is 0000, Subscriptions is 'With User AC Only', Coder is G.729A, and Tones is EUROPE-PUBLIC.
- Radio:** Disable is checked, Radio-Id, Sync Master, and Alt Sync Master are empty.
- Gatekeeper:** Mode is Active, Gatekeeper is 172.18.0.64, Alternate Gatekeeper is 0.0.0.0, and Protocol is Skinny.
- LDAP:** Master is LDAP Server is checked, Server is 172.18.2.100, and Alt Server is 0.0.0.0.
- License:** DECT Multicell is Multicell=255,-/10017174254,Kirk,Horsens:f6c9-5f8f-d93e-24ee and DECT Skinny is Skinny=1000,-/Kirk,Test:afc2-3f27-9365-da61. A 'Browse...' button is present.

#### 1 In the **IP Address** area:

- Deselect the **DHCP** check box.

First time you power up the KIRK Wireless Server 600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the KIRK Wireless Server 600v3, provided by your system administrator.

This IP address is now the default address when accessing the KIRK Wireless Server 600v3.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.
- In the **Host Name** field, type the host name of the KIRK Wireless Server 600v3.

The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KIRK Wireless Server 600v3 (to be found on the label on the rear of the KIRK Wireless Server 600v3). Eg. **ip1200-0f-01-9d**

**Note:** When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KIRK Wireless Server 600v3 in question and valid on the whole network.

**2** In the **Gatekeeper** area:

- From the **Mode** list, select **Active**.
- In the **Gatekeeper** field, type the IP address of your call handler.  
Contact your system administrator for more information.
- In the **Alternative Gatekeeper** field, type an alternative IP address of your call handler (optionally).  
Contact your system administrator for more information.
- From the **Protocol** list, select either **H323**, **SIP** or **Skippy** depending on the protocol you are using.

**3** In the **System** area:

- In the **AC** field, type an authentication code (optionally).
- From the **Subscriptions** list, select either **Allow Anonymous**, **With User AC only**, or **Disabled**.

**Note:** It is recommended to select **With User AC only**. When subscribing a new handset to the system it is possible to use an authentication code (AC). If you want to use the authentication code, you must select **With User AC only**. For more information about subscription of handsets and authentication codes, refer to [“Subscribing Handsets” on page 162](#).

- From the **Coder** list, select a voice compression value that matches your telephony infrastructure.  
Contact your system administrator for more information.
- From the **Tones** list, select a ring tone.

**4** In the **Radio** area:

- In the **Radio-Id** field, type **1**.

**5** Save the configuration.

For more information about saving the configuration, refer to [“Saving Configurations” on page 150](#).

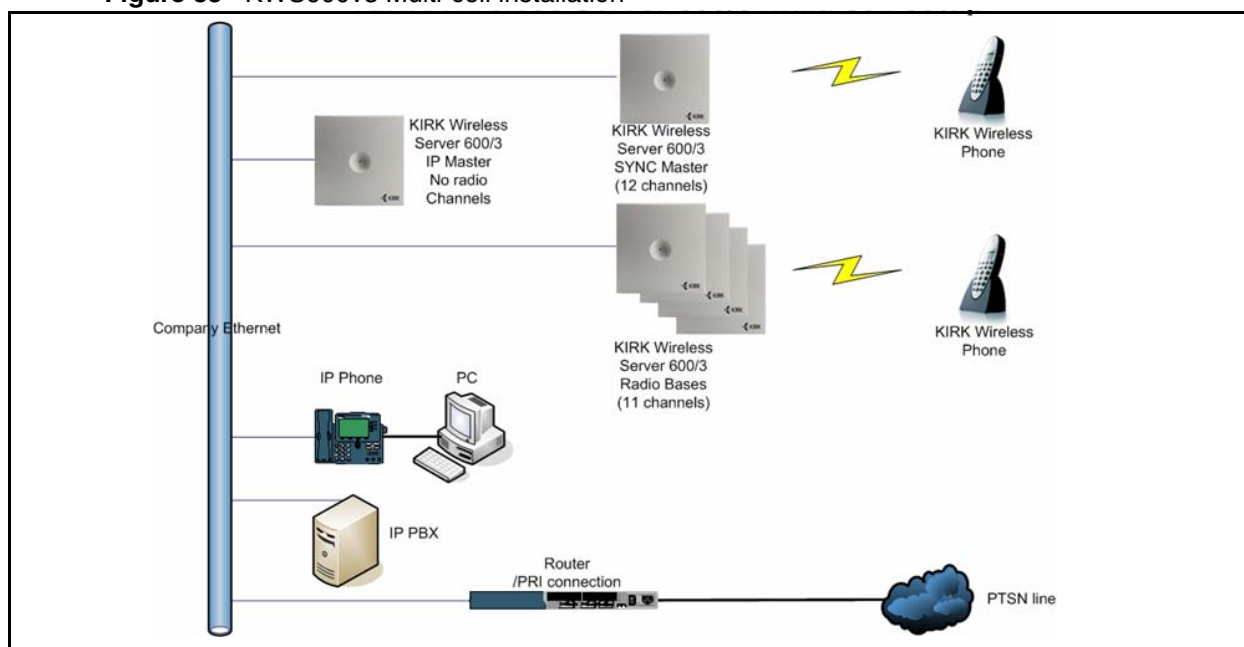
## 7.8 Configuring Multi-Cell Solution through KIRK Configuration Tool

**Note:** Using the KIRK Configuration Tool is recommended when configuring medium-sized to large installations.

For information on accessing the KIRK Configuration Tool, refer to [“Accessing the KIRK Configuration Tool”](#) on page 77.

This section describes how to configure a KIRK Wireless Server 600v3 Multi-cell solution.

**Figure 85** KWS600v3 Multi-cell installation



This section contains information about:

- [“Configuring the Master \(Primary\) KIRK Wireless Server 600v3”](#) on page 90
- [“Configuring the Alternative Master KIRK Wireless Server 600v3”](#) on page 108
- [“Configuring LDAP Server”](#) on page 139
- [“Configuring Alternative LDAP Server”](#) on page 142
- [“Configuring Sync Master”](#) on page 145
- [“Configuring the Secondary KIRK Wireless Server 600v3”](#) on page 114
- [“Saving Configurations”](#) on page 150
- [“Uploading Configuration Files”](#) on page 151
- [“Opening Configuration Files”](#) on page 153

## 7.8.1 Configuring the Master (Primary) KIRK Wireless Server 600v3

**Note:** To configure a KIRK Wireless Server 600v3 Multi-cell solution it is necessary to obtain a multi-cell license from [www.kirktelecom.com](http://www.kirktelecom.com). Contact KIRK telecom sales support by e-mail ([mph@kirktelecom.com](mailto:mph@kirktelecom.com) or [hbk@kirktelecom.com](mailto:hbk@kirktelecom.com)) and require a multi-cell license for the KIRK Wireless Server 600v3. You receive an e-mail containing a text file with the multi-cell license. This file must be saved in order to be uploaded to the system.

In the **Master** tab you configure the Master (Primary) KIRK Wireless Server.

**Figure 86** KIRK Configuration Tool: Master tab

The screenshot shows the 'KIRK Configuration Tool for KWS600v3' window with the 'Master' tab selected. The configuration fields are as follows:

- IP Address:** DHCP is unchecked. IP Address is 172.18.2.100, Network Mask is 255.255.0.0, Default Gateway is 172.18.0.1, and Host Name is IP1200-0f-00-9d.
- System:** AC is 0000, Subscriptions is 'With User AC Only', Coder is G.729A, and Tones is EUROPE-PUBLIC.
- Radio:** Disable is checked, Radio-Id, Sync Master, and Alt Sync Master are empty.
- Gatekeeper:** Mode is Active, Gatekeeper is 172.18.0.64, Alternate Gatekeeper is 0.0.0.0, and Protocol is Skinny.
- LDAP:** Master is LDAP Server is checked, Server is 172.18.2.100, and Alt Server is 0.0.0.0.
- License:** DECT Multicell is Multicell=255,-/10017174254,Kirk,Horsens:f6c9-5f8f-d93e-24ee and DECT Skinny is Skinny=1000,-Kirk,Test:afc2-3f27-9365-da61.

### 1 In the **IP Address** area:

- Deselect the **DHCP** check box.

First time you power up the KIRK Wireless Server 600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the Master KIRK Wireless Server 600v3, provided by your system administrator.

This IP address is now the default address when accessing the Master KIRK Wireless Server 600v3.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.

- In the **Host Name** field, type the host name of the KIRK Wireless Server 600v3.  
The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KIRK Wireless Server 600v3 (to be found on the label on the rear of the KIRK Wireless Server 600v3). Eg. **ip1200-0f-01-9d**

**Note:** When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KIRK Wireless Server 600v3 in question and valid on the whole network.

**2** In the **Gatekeeper** area:

- From the **Mode** list, select **Active**. Selecting **Active** defines the KIRK Wireless Server 600v3 as a Primary (Master).
- In the **Gatekeeper** field, type the IP address of your call handler.  
Contact your system administrator for more information.
- In the **Alternative Gatekeeper** field, type an alternative IP address of your call handler (optionally).  
Contact your system administrator for more information.
- From the **Protocol** list, select either **H323**, **SIP** or **Skippy** depending on the protocol you are using.

**3** In the **System** area:

- In the **AC** field, type an authentication code (optionally).
- From the **Subscriptions** list, select either **Allow Anonymous**, **With User AC only**, or **Diabled**.

**Note:** It is recommended to select **With User AC only**. When subscribing a new handset to the system it is possible to use an authentication code (AC). If you want to use the authentication code, you must select **With User AC only**. For more information about subscription of handsets and authentication codes, refer to [“Subscribing Handsets” on page 162](#).

- From the **Coder** list, select a voice compression value that matches your telephony infrastructure.  
Contact your system administrator for more information.
- From the **Tones** list, select a ring tone.

**4** In the **LDAP** area:

The Master KIRK Wireless Server 600v3 is automatically defined as the LDAP Server.

If you need to configure a standalone LDAP Server in your system, you must deselect the **Master is LDAP Server** check box.

**Note:** If deselecting the **Master is LDAP Server** check box on the **Master** tab, an **LDAP Server** tab becomes available. For more information about configuring a standalone LDAP Server, refer to [“Configuring LDAP Server” on page 139](#).

**5** In the **Radio** field:

- Select the **Disable** check box to disable the radio.

**6** In the **License** area:

- Click **Browse** to search for the text file containing license information, select it, and then click **Open**.

**Note:** Remember to obtain a multi-cell license from [www.kirktelecom.com](http://www.kirktelecom.com). Contact KIRK telecom sales support by e-mail ([mph@kirktelecom.com](mailto:mph@kirktelecom.com) or [hbk@kirktelecom.com](mailto:hbk@kirktelecom.com)) and require a multi-cell license for the KIRK Wireless Server 600v3.

**7** Save the configuration now or wait until you have finished configuring the whole installation.

For more information about saving the configuration, refer to [“Saving Configurations” on page 150](#).

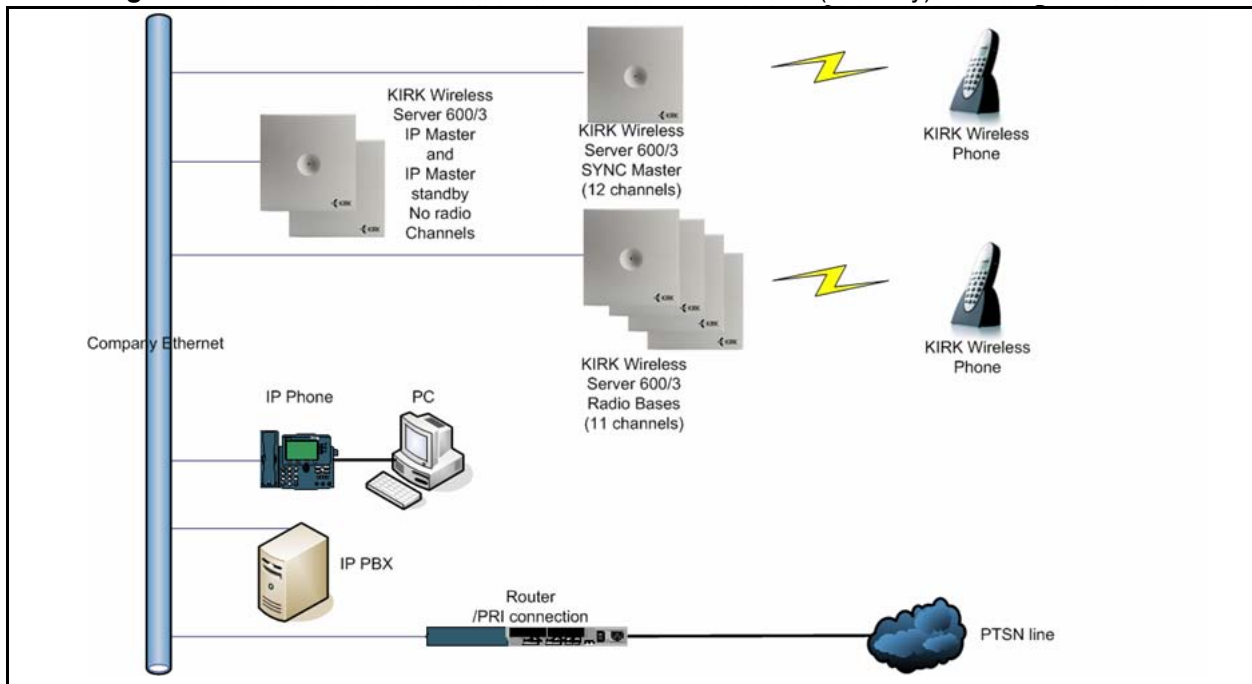


## 7.8.2 Configuring the Alternative Master KIRK Wireless Server 600v3

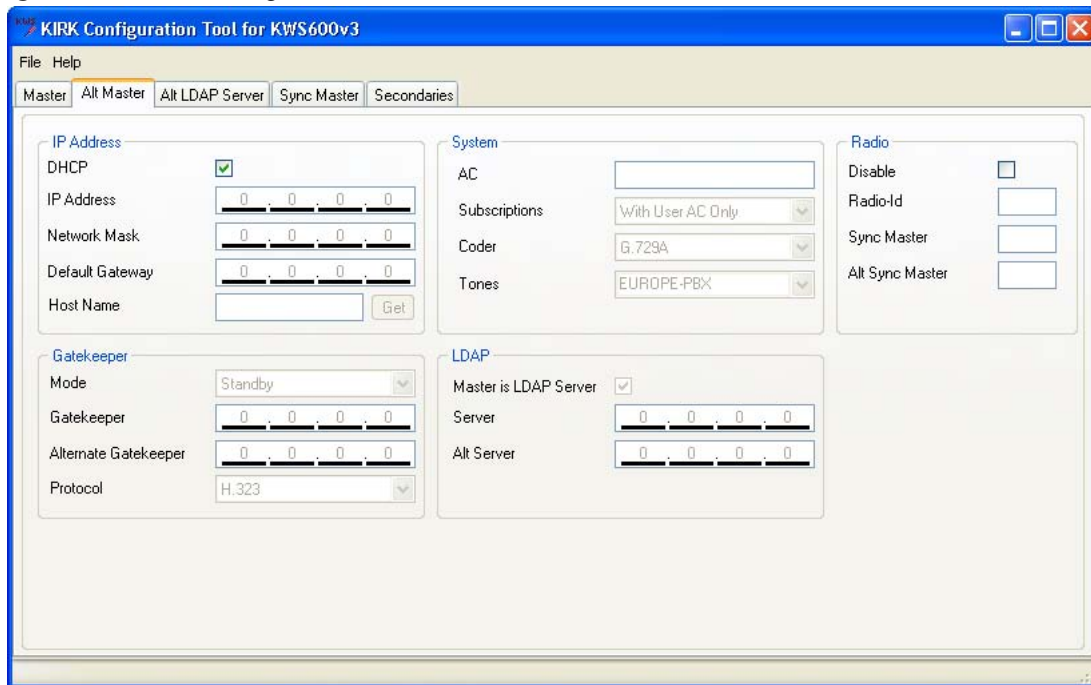
This section describes how to configure an alternative (Standby) Master KIRK Wireless Server 600v3 in a multi-cell solution. In case the Master KIRK Wireless Server 600v3 stops working, the alternative (Standby) Master KIRK Wireless Server 600v3 will take over connection to the call handler.

**Note:** Configuring an alternative Master KIRK Wireless Server 600v3 is optionally - and only recommended - if you have a very large multi-cell installation (number of KIRK Wireless Server 600v3 and/or handsets).

**Figure 87** KWS600v3 Multi-cell installation with Alternative (Standby) Master



In the **Alt Master** tab you configure the Alternative Master KIRK Wireless Server.

**Figure 88** KIRK Configuration Tool: Alt Master tab

**1** In the **IP Address** area:

- Deselect the **DHCP** check box.

First time you power up the KIRK Wireless Server 600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the alternative Master KIRK Wireless Server 600v3, provided by your system administrator.

This IP address is now the default address when accessing the alternative Master KIRK Wireless Server 600v3.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.
- In the **Host Name** field, type the host name of the KIRK Wireless Server 600v3.

The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KIRK Wireless Server 600v3 (to be found on the label on the rear of the KIRK Wireless Server 600v3). Eg. **ip1200-0f-01-9d**

**Note:** When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KIRK Wireless Server 600v3 in question and valid on the whole network.

- 2 In the **Gatekeeper** area:
  - From the **Mode** list, select **Standby**. Selecting **Standby** defines the KIRK Wireless Server 600v3 as an alternative (Standby) Master.
- 3 In the **Radio** field:
  - Select the **Disable** check box to disable the radio.
- 4 Save the configuration now or wait until you have finished configuring the whole installation.  
For more information about saving the configuration, refer to [“Saving Configurations” on page 150](#).

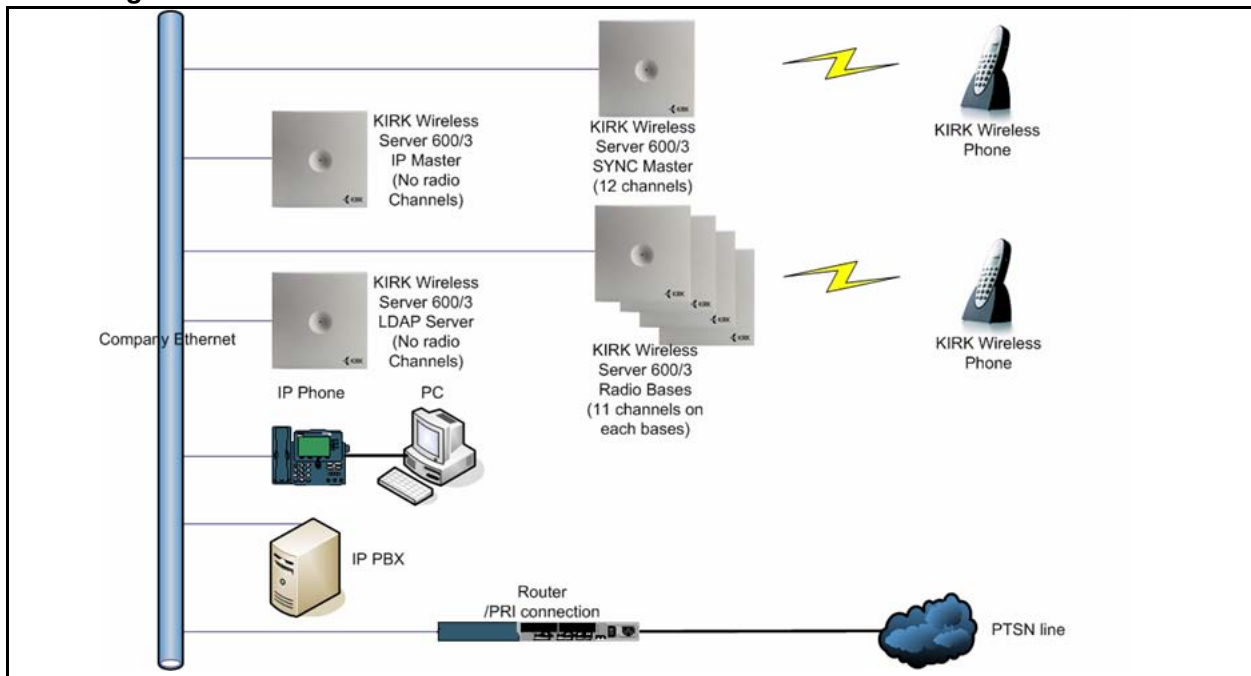
### 7.8.3 Configuring LDAP Server

In a KIRK Wireless Server 600v3 Multi-cell solution it is possible to configure an LDAP Server to handle all handset/user registration data (such as name, directory number, IPEI etc.).

If you configure an LDAP Server to handle all handset/user registration and read/write information between the primaries and secondaries of a KIRK Wireless Server 600v3 solution, then the Master KIRK Wireless Server 600v3 only manage the connection to the call handler.

**Note:** Configuring an LDAP Server is only recommended in very large multi-cell installations (more than 500-600 handsets).

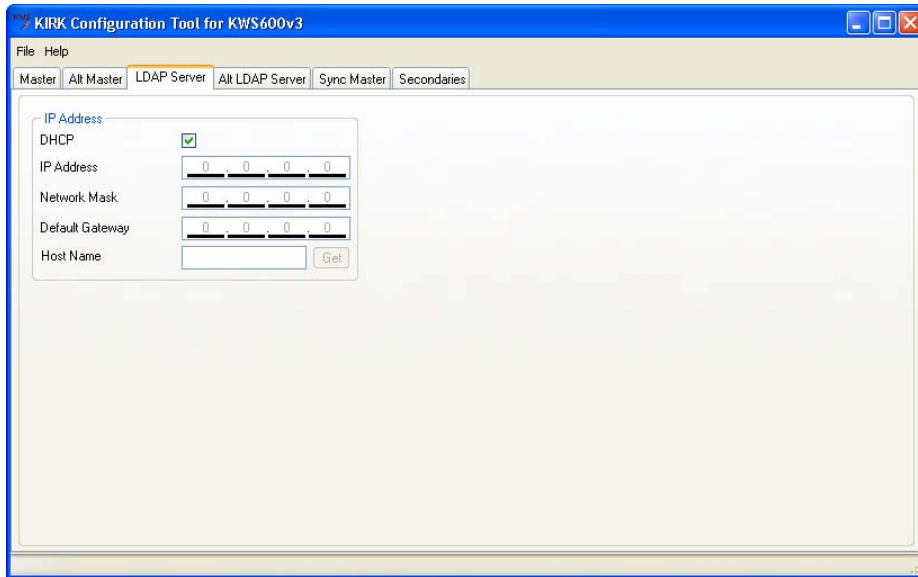
**Figure 89** KWS600v3 Multi-cell installation with LDAP Server



In the **LDAP Server** tab you configure the LDAP Server.

**Note:** The **LDAP Server** tab is only available, if the **Master is LDAP Server** check box on the **Master** tab is deselected.

**Figure 90** KIRK Configuration Tool: LDAP Server tab



**1** In the **IP Address** area:

- Deselect the **DHCP** check box.

First time you power up the KIRK Wireless Server 600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the LDAP Server, provided by your system administrator.

This IP address is now the default address when accessing the LDAP Server.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.
- In the **Host Name** field, type the host name of the KIRK Wireless Server 600v3.

The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KIRK Wireless Server 600v3 (to be found on the label on the rear of the KIRK Wireless Server 600v3). Eg. **ip1200-0f-01-9d**

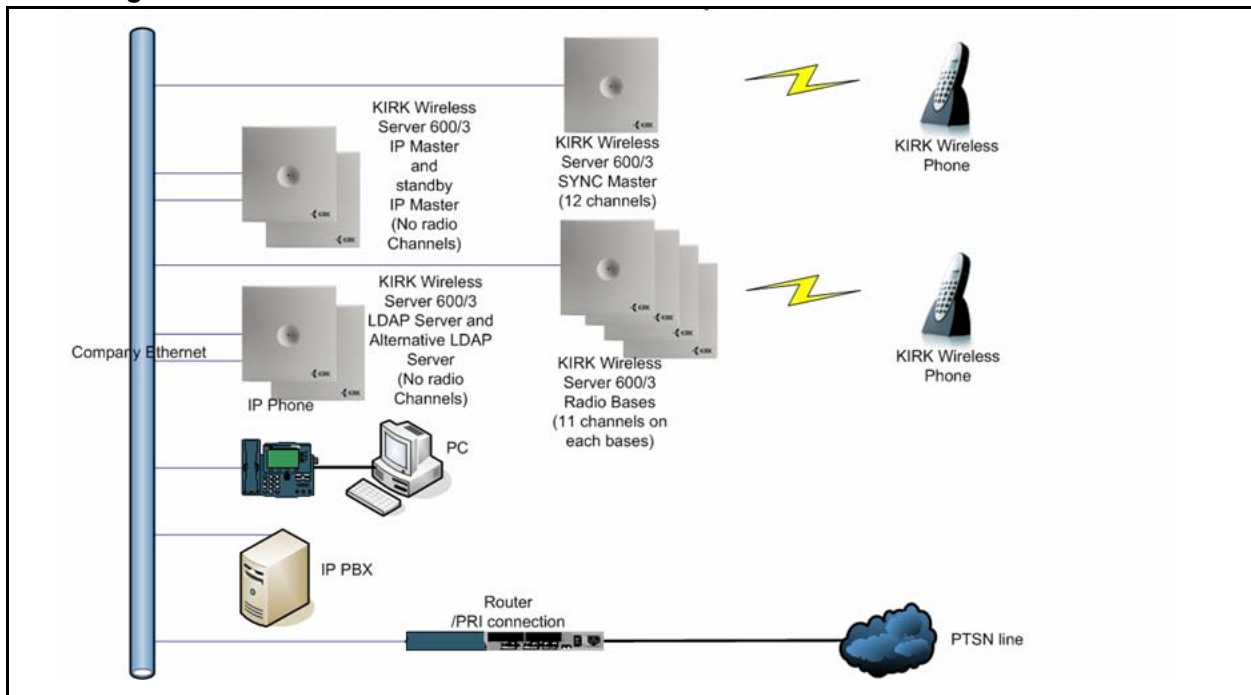
**Note:** When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KIRK Wireless Server 600v3 in question and valid on the whole network.

### 7.8.4 Configuring Alternative LDAP Server

Working with LDAP Servers, you can also define a KIRK Wireless Server 600v3 to be an alternative LDAP Server. In case the LDAP Server stops working, the alternative LDAP Server will take over the LDAP Replication to the radio units.

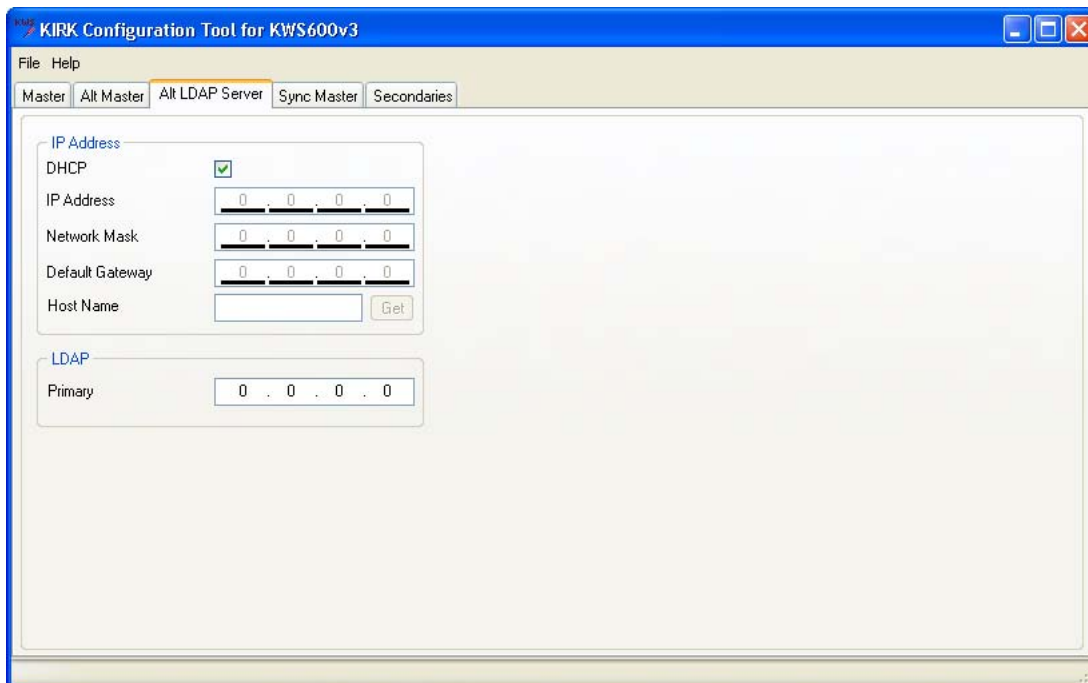
**Note:** In case the Master KIRK Wireless Server 600v3 and the LDAP Server is the same unit, the alternative LDAP Server will also take the role as the Master KIRK Wireless Server if the LDAP Server stops working.

**Figure 91** KWS600v3 Multi-cell installation with Alternative LDAP Server



In the **Alt LDAP Server** tab you configure the alternative LDAP Server.

**Figure 92** KIRK Configuration Tool: Alt LDAP Server tab



**1** In the **IP Address** area:

- Deselect the **DHCP** check box.

First time you power up the KIRK Wireless Server 600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the alternative LDAP Server, provided by your system administrator.

This IP address is now the default address when accessing the alternative LDAP Server.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.
- In the **Host Name** field, type the host name of the KIRK Wireless Server 600v3.

The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KIRK Wireless Server 600v3 (to be found on the label on the rear of the KIRK Wireless Server 600v3). Eg. **ip1200-0f-01-9d**

**Note:** When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KIRK Wireless Server 600v3 in question and valid on the whole network.

**2** In the **LDAP** area:

- In the **Primary** field, type the IP address of the primary LDAP Server.

**3** Save the configuration now or wait until you have finished configuring the whole installation.

For more information about saving the configuration, refer to [“Saving Configurations” on page 150](#).



## 7.8.5 Configuring Sync Master

This section describes how to configure a Sync Master KIRK Wireless Server 600v3 in a multi-cell solution.

KIRK Wireless Server 600v3 primary and secondaries uses the existing DECT air interface to synchronize to each other on. One KIRK Wireless Server 600v3 is configured as a Sync (synchronization) Master in the system. It is not necessary to configure what KIRK Wireless Server 600v3 the Sync Master should synchronize to.

In the **Sync Master** tab you configure the Sync Master.

**Figure 93** KIRK Configuration Tool: Sync Master tab

The screenshot shows the 'KIRK Configuration Tool for KWS600v3' window with the 'Sync Master' tab selected. The interface includes a menu bar (File, Help) and a tabbed interface with tabs for Master, Alt Master, Alt LDAP Server, Sync Master, and Secondaries. The 'Sync Master' tab contains the following configuration sections:

- IP Address:**
  - DHCP:
  - IP Address: 172 . 18 . 2 . 104
  - Network Mask: 255 . 255 . 0 . 0
  - Default Gateway: 172 . 18 . 0 . 1
  - Host Name: IP1200-0f-00-97 (with a 'Get' button)
- Radio:**
  - Radio-Id: 4
  - Master: 172 . 18 . 2 . 100
  - Alt Master: 0 . 0 . 0 . 0
- LDAP:**
  - Primary: 172 . 18 . 2 . 100
  - Alt: 0 . 0 . 0 . 0

### 1 In the **IP Address** area:

- Deselect the **DHCP** check box.

First time you power up the KIRK Wireless Server 600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **IP Address** field, type the IP address of the Sync Master, provided by your system administrator.

This IP address is now the default address when accessing the Sync Master.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.

- In the **Host Name** field, type the host name of the KIRK Wireless Server 600v3.  
The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KIRK Wireless Server 600v3 (to be found on the label on the rear of the KIRK Wireless Server 600v3). Eg. **ip1200-0f-01-9d**

**Note:** When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KIRK Wireless Server 600v3 in question and valid on the whole network.

**2** In the **LDAP** area:

- In the **Primary** field, type the IP address of the primary LDAP Server.
- In the **Alt** field, type the IP address of the alternative LDAP Server.

**3** In the **Radio** area:

- In the **Master** field, type the IP address of the Master KIRK Wireless Server 600v3.
- In the **Alt Master** field, type the IP address of the alternative (Standby) Master KIRK Wireless Server 600v3.

**Note:** The radio ID of the KIRK Wireless Server 600v3 is by default identical to the last octet of its IP address. It is recommended not to change the radio ID.

**4** Save the configuration now or wait until you have finished configuring the whole installation.

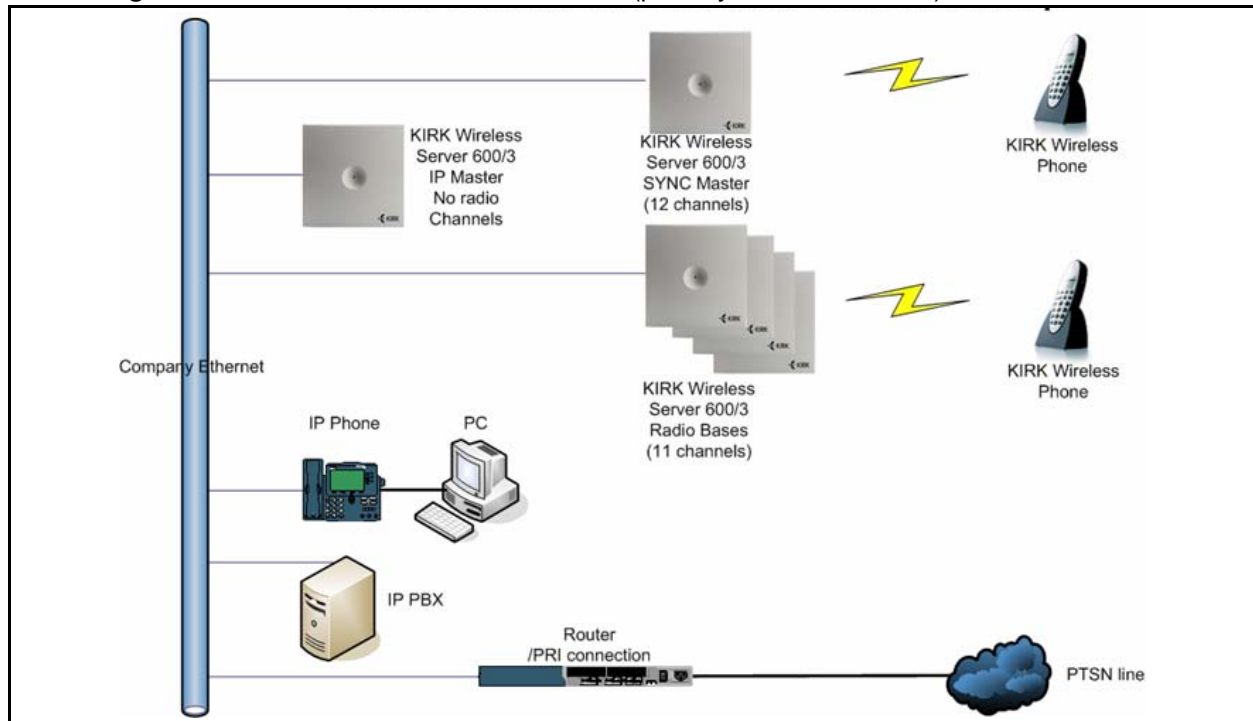
For more information about saving the configuration, refer to [“Saving Configurations” on page 150](#).

## 7.8.6 Configuring the Secondary KIRK Wireless Server 600v3

This section describe how to configure KIRK Wireless Server 600v3 secondaries in a multi-cell solution.

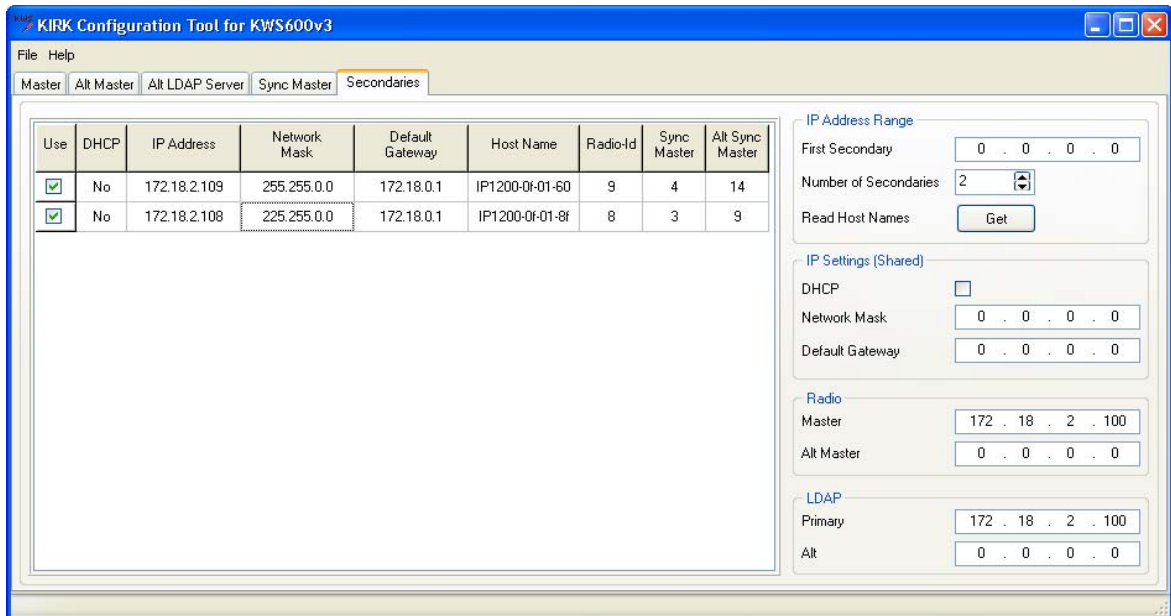
After configuring the Master (Primary) KIRK Wireless Server 600v3, you need to configure each Secondary KIRK Wireless Server 600v3 to be used in the system.

**Figure 94** KWS600v3 Multi-cell installation (primary and secondaries)



In the **Secondaries** tab you configure the Secondary KIRK Wireless Server 600v3.

**Figure 95** KIRK Configuration Tool: Secondaries tab



**1** In the **IP Address Range** area:

- In the **First Secondary** field, type the IP address of the first Secondary KIRK Wireless Server 600v3.

Contact your system administrator for more information.

- From the **Number of Secondaries** list, define the total number of KIRK Wireless Server 600v3 secondaries in your installation (see your site planner).

**Note:** The KIRK Wireless Server 600v3 secondaries will be provided with consecutively numbered IP addresses. The last octet of the IP address will automatically become the radio ID for the unit.

- Provide the host name of the KIRK Wireless Server 600v3 in question, and radio ID of the Sync Master and Alternative Master Sync.
  - Click in the **host name** column of the Secondary KIRK Wireless Server 600v3 in question (in the left area of the **Secondaries** tab).

A **Secondary Settings** dialog box appears.

**Figure 96** KIRK Configuration Tool: Secondary Settings dialog box

- In the **Host Name** field, type the host name. The host name consist of **ip1200-** followed by the last three octets of the MAC address of the KIRK Wireless Server 600v3 (to be found on the label on the rear of the KIRK Wireless Server 600v3). Eg. **ip1200-0f-01-8d**

**Note:** When clicking the **Get** button, the system provides the host name automatically. The **Get** button can only be used, if working online and if the IP address is the specific IP address of the KIRK Wireless Server 600v3 in question and valid on the whole network.

- In the **Sync Master** field, type the radio ID of the Sync Master. See your site planner.
- In the **Alt Sync Master** field, type the radio ID of the alternative Sync Master. See your site planner.

**Note:** The radio ID of the Secondary KIRK Wireless Server is by default identical to the last octet of its IP address. It is recommended not to change the radio ID.

- Click **OK** to close the dialog box.

**2** In the **IP Settings (Shared)** area:

- Deselect the **DHCP** check box.

First time you power up the KIRK Wireless Server 600v3 it acts as a DHCP client. To assign a specific IP address to the unit, it is necessary to disable the DHCP mode.

- In the **Network Mask** field, type the network mask.
- In the **Default Gateway** field, type the IP address of the gateway.

**3** In the **Radio** area:

- In the **Master** field, type the IP address of the Master KIRK Wireless Server 600v3.
- In the **Alt Master** field, type the IP address of the alternative (Standby) Master KIRK Wireless Server 600v3.

**4** In the **LDAP** area:

- In the **Primary** field, type the IP address of the primary LDAP Server.
- In the **Alt** field, type the IP address of the alternative LDAP Server.

- 5 Save the configuration now or wait until you have finished configuring the whole installation. For more information about saving the configuration, refer to [“Saving Configurations” on page 150](#).

### 7.8.7 Saving Configurations

This section describes how to save your configurations. You can save all the configurations or just some of them.

- 1 On the **File** menu, click **Save**.  
A **Save** dialog box appears.

**Figure 97** KIRK Configuration Tool: Save dialog box



- 2 Select the configurations you want to save, and then click **OK**.
- 3 Indicate in which folder the file should be saved, and then click **OK**.

## 7.8.8 Uploading Configuration Files

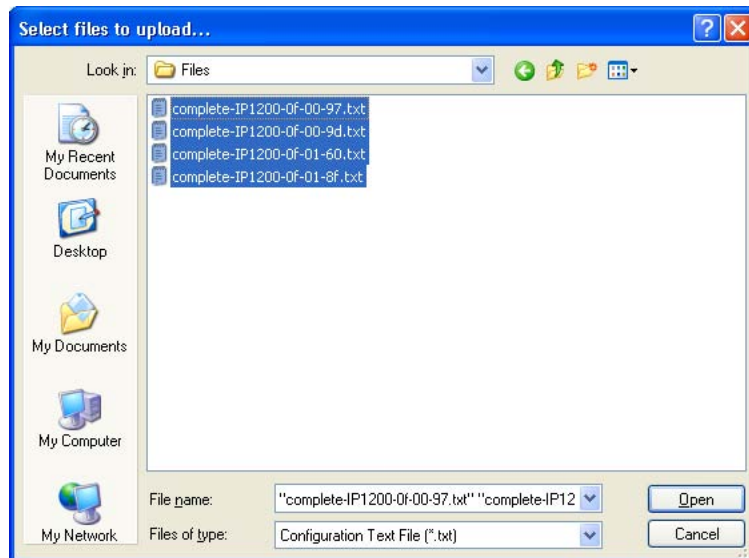
This section describes how to upload configuration files.

**Note:** When uploading a configuration file to the KIRK Wireless Server 600v3, the KIRK Wireless Server 600v3 in question must have a specific IP address valid to the whole network. To ensure that the KIRK Wireless Server 600v3 has a specific IP address valid to the network either get an IP address automatically through DHCP mode or assign a specific IP address through the Administration Page. For more information about assigning a specific IP address through the Administration Page, refer to [“Assigning a Specific IP Address \(Primary\)” on page 92](#).

1 On the **File** menu, click **Upload**.

A **Select files to upload** dialog box appears.

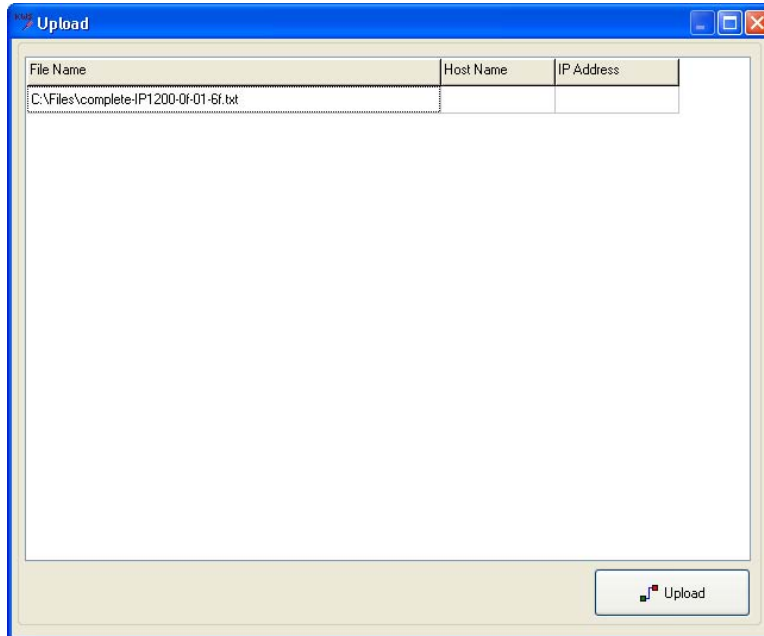
**Figure 98** KIRK Configuration Tool: Select files to upload dialog box



- 2 Select the configuration files to be uploaded, and then click **Open**.

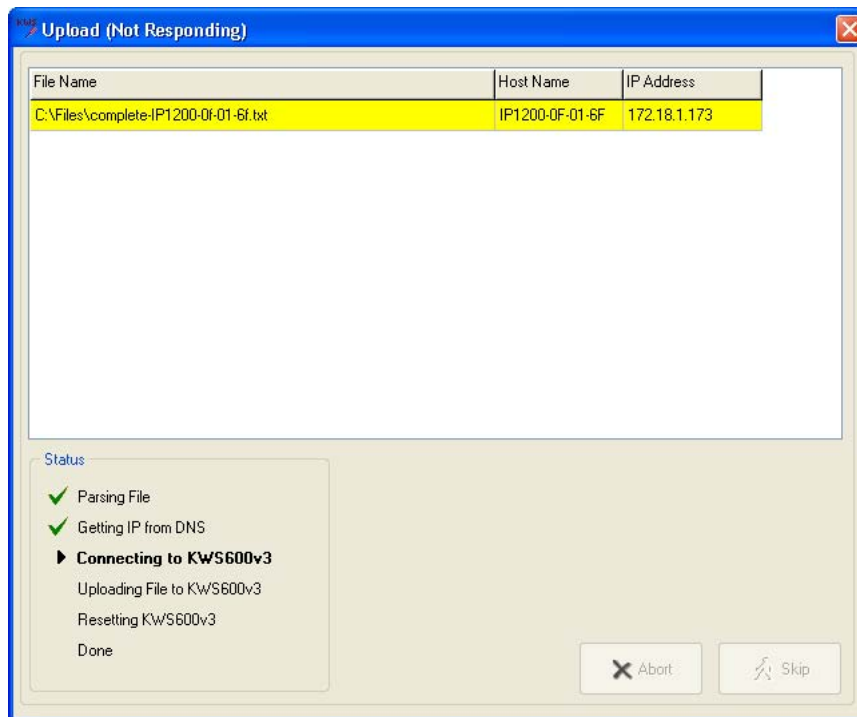
An **Upload** dialog box appears:

**Figure 99** KIRK Configuration Tool: Upload dialog box



- 3 Click **Upload**.

The following dialog box appears.





In the **Status** area you can see the status of the uploading process.

- Green - OK
  - Yellow - working
  - Red - error
- 4 If you receive an error, click either **Abort** to abort all uploads or click **Skib** to skip the upload in question and continue to the next (if any).

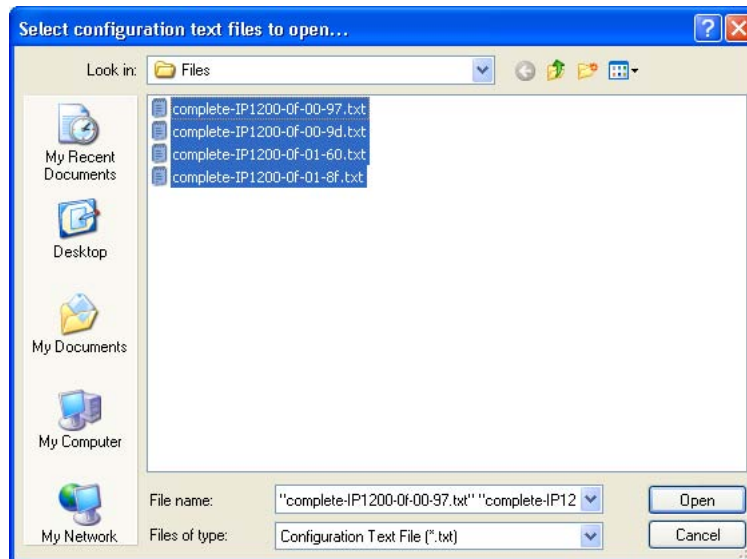
### 7.8.9 Opening Configuration Files

This section describes how to open configuration files.

- 1 On the **File** menu, click **Open**.

A **Select configuration text files to open** dialog box appears.

**Figure 100** KIRK Configuration Tool: Select config. text file to open dialog box



- 2 Select the configuration text files in question, and then click **Open**.

All configuration data is read into the system and shown in the different tabs.



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## Chapter 8 KIRK Handset Registration and Subscription

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This section provides information about KIRK Handset registration and subscription. You must register and subscribe a handset before you can use it.

**Note:** This section only describes how to register handsets on the Master KIRK Wireless Server 600v3/LDAP server. You also need to register the users on the call handler. For registering users on the call handler, refer to the user guide accompanying this product.

When registering KIRK Handsets you enter information about the handsets settings (such as; the handsets serial number (IPEI), name etc.) in the system database. When subscribing handsets you subscribe a registered handset to the system for usage. If the handset is not registered in the system database, subscription of the handset is not possible.

This section includes information about:

- [“Registering KIRK Handsets” on page 155](#)
- [“Subscribing KIRK Handsets” on page 162](#)

### 8.1 Registering KIRK Handsets

To register KIRK Handsets you use the web based Administration Page of the KIRK Wireless Server 600v3.

**Note:** If using an LDAP Server, the handsets must be registered on the LDAP Server and not on the Master (Primary) KIRK Wireless Server 600v3.

Each KIRK Handset in a KIRK solution must be programmed with the serial number (IPEI) before it can operate. This serial number must be registered in the web based Administration Page of the KIRK Wireless Server 600v3. Serial numbers are a unique fingerprint of each handset. The serial number is programmed into the handset during the manufacturing process and cannot be changed by field personnel.

**Note:** The KIRK Wireless Server 600v3 does not provide any service to a handset whose serial number is not registered in the web based Administration Page.

For more information about accessing the Administration Page, see [“Accessing the Web Based Administration Page” on page 75](#).

This section describes how to register handsets using:

- [“Registering Handsets Using Skinny Protocol” on page 156](#)
- [“Registering Handsets Using H323 Protocol” on page 158](#)
- [“Registering Handsets Using SIP Protocol” on page 160](#)

### 8.1.1 Registering Handsets Using Skinny Protocol

- Under **Administration** menu, click **DECT**, and then click **Users**.

The following window appears.

**Figure 101** Adm. Page: Administration/DECT/Users page

#### KIRK Wireless Server 600/3

Configuration		Statistics	Users	Unknown	Radios	Master Calls		
General		<input type="text"/> show <input type="button" value="new"/>						
IP								
ETH0								
ETH1								
LDAP								
DECT								
Administration								
DECT								
Download								
Upload								
Diagnostics								
Reset								
		Long Name	Name	No	Display	IPEI	AC	Registration
		SEP000880000255	SEP000880000255	880255	test 880255	000880000255		172.18.0.64
		SEP000770759055	SEP000770759055	18062	18062	000770759055		172.18.0.64
		SEP000880000425	SEP000880000425	880425	test 880425	000880000425		172.18.0.64
		SEP000880000290	SEP000880000290	880290	test 880290	000880000290		172.18.0.64
		SEP000880000314	SEP000880000314	880314	test 880314	000880000314		172.18.0.64
		SEP000880000451	SEP000880000451	880451	test 880451	000880000451		172.18.0.64
		SEP000770751864	SEP000770751864	18023	18023	000770751864		172.18.0.64
		SEP000880000525	SEP000880000525	880525	test 880525	000880000525		172.18.0.64
		SEP000880000272	SEP000880000272	880272	test 880272	000880000272		172.18.0.64
		SEP000880000319	SEP000880000319	880319	test 880319	000880000319		172.18.0.64
		SEP000880000578	SEP000880000578	880578	test 880578	000880000578		172.18.0.64
		SEP000880000076	SEP000880000076	880076	test 880076	000880000076		172.18.0.64

- Click **New**.

An **Edit User** dialog box appears.

**Figure 102** Adm. Page: Edit User dialog box

The screenshot shows a web browser window titled "http://172.18.2.100 - Edit User - Microsoft Internet Explorer". The main content area contains a form with the following fields and buttons:

- Long Name:
- Name:
- Number:
- Password:
- Display Text:
- IPEI:
- Auth. Code:
- Buttons: , ,

**3** In the **Long Name** field, type any name. It is recommended to type the same information as in the **Name** field (see step 4 below).

**4** In the **Name** field, type **SEP** followed by the IPEI number of the handset.

The IPEI number is found either on a label under the battery, on the packaging label, or by pressing \*99984\*✓/OK on the handset to be registered. The serial number consists of a five-digit handset type (manufacturer code) and then a seven-digit handset number.

For more information about retrieving the IPEI number (serial number), refer to [“Retrieving the Serial Number of the KIRK Handset” on page 70](#)

For more general information about the IPEI number (serial number), refer to [“Registering KIRK Handsets” on page 155](#).

**5** In the **Number** field, type a number (eg. 320).

**Note:** The number must be unique.

**6** In the **Display Text** field, type a standby text (max. 36 characters) to be displayed when the handset is on hook.

**7** In the **IPEI** field, type the IPEI number of the handset.

**8** In the **Auth. Code** field, type the authentication code (AC)(optional).

The authentication code is a subscription password of a maximum eight digits, defined by the technicians, and can be used when connecting the handset to the KIRK Wireless Server 600v3. The authentication code is a subscription pin code for the individual handset.

**9** Click **Apply**.

**10** Repeat step 1 to 9 for each new handset to be registered to the system.

**11** Click **OK** to save the registration(s).

In the **DECT/Users** page the new handset/user now has the status **Pending**, meaning that it is ready for subscription.

### 8.1.2 Registering Handsets Using H323 Protocol

- 1 Under **Administration** menu, click **DECT**, and then click **Users**.

The following window appears.

**Figure 103** Adm. Page: Administration/DECT/Users page

#### KIRK Wireless Server 600/3

Configuration		Statistics	Users	Unknown	Radios	Master Calls																																																																																											
<b>General</b> IP <input type="text"/> show ETH0 <input type="text"/> new ETH1 <input type="text"/> LDAP <input type="text"/> DECT <input type="text"/>		<table border="1"> <thead> <tr> <th>Long Name</th> <th>Name</th> <th>No</th> <th>Display</th> <th>IPEI</th> <th>AC</th> <th>Registration</th> </tr> </thead> <tbody> <tr> <td>SEP000880000255</td> <td>SEP000880000255</td> <td>880255</td> <td>test 880255</td> <td>000880000255</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000770759055</td> <td>SEP000770759055</td> <td>18062</td> <td>18062</td> <td>000770759055</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000880000425</td> <td>SEP000880000425</td> <td>880425</td> <td>test 880425</td> <td>000880000425</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000880000290</td> <td>SEP000880000290</td> <td>880290</td> <td>test 880290</td> <td>000880000290</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000880000314</td> <td>SEP000880000314</td> <td>880314</td> <td>test 880314</td> <td>000880000314</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000880000451</td> <td>SEP000880000451</td> <td>880451</td> <td>test 880451</td> <td>000880000451</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000770751864</td> <td>SEP000770751864</td> <td>18023</td> <td>18023</td> <td>000770751864</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000880000525</td> <td>SEP000880000525</td> <td>880525</td> <td>test 880525</td> <td>000880000525</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000880000272</td> <td>SEP000880000272</td> <td>880272</td> <td>test 880272</td> <td>000880000272</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000880000319</td> <td>SEP000880000319</td> <td>880319</td> <td>test 880319</td> <td>000880000319</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000880000578</td> <td>SEP000880000578</td> <td>880578</td> <td>test 880578</td> <td>000880000578</td> <td></td> <td>172.18.0.64</td> </tr> <tr> <td>SEP000880000076</td> <td>SEP000880000076</td> <td>880076</td> <td>test 880076</td> <td>000880000076</td> <td></td> <td>172.18.0.64</td> </tr> </tbody> </table>					Long Name	Name	No	Display	IPEI	AC	Registration	SEP000880000255	SEP000880000255	880255	test 880255	000880000255		172.18.0.64	SEP000770759055	SEP000770759055	18062	18062	000770759055		172.18.0.64	SEP000880000425	SEP000880000425	880425	test 880425	000880000425		172.18.0.64	SEP000880000290	SEP000880000290	880290	test 880290	000880000290		172.18.0.64	SEP000880000314	SEP000880000314	880314	test 880314	000880000314		172.18.0.64	SEP000880000451	SEP000880000451	880451	test 880451	000880000451		172.18.0.64	SEP000770751864	SEP000770751864	18023	18023	000770751864		172.18.0.64	SEP000880000525	SEP000880000525	880525	test 880525	000880000525		172.18.0.64	SEP000880000272	SEP000880000272	880272	test 880272	000880000272		172.18.0.64	SEP000880000319	SEP000880000319	880319	test 880319	000880000319		172.18.0.64	SEP000880000578	SEP000880000578	880578	test 880578	000880000578		172.18.0.64	SEP000880000076	SEP000880000076	880076	test 880076	000880000076		172.18.0.64
Long Name	Name	No	Display	IPEI	AC	Registration																																																																																											
SEP000880000255	SEP000880000255	880255	test 880255	000880000255		172.18.0.64																																																																																											
SEP000770759055	SEP000770759055	18062	18062	000770759055		172.18.0.64																																																																																											
SEP000880000425	SEP000880000425	880425	test 880425	000880000425		172.18.0.64																																																																																											
SEP000880000290	SEP000880000290	880290	test 880290	000880000290		172.18.0.64																																																																																											
SEP000880000314	SEP000880000314	880314	test 880314	000880000314		172.18.0.64																																																																																											
SEP000880000451	SEP000880000451	880451	test 880451	000880000451		172.18.0.64																																																																																											
SEP000770751864	SEP000770751864	18023	18023	000770751864		172.18.0.64																																																																																											
SEP000880000525	SEP000880000525	880525	test 880525	000880000525		172.18.0.64																																																																																											
SEP000880000272	SEP000880000272	880272	test 880272	000880000272		172.18.0.64																																																																																											
SEP000880000319	SEP000880000319	880319	test 880319	000880000319		172.18.0.64																																																																																											
SEP000880000578	SEP000880000578	880578	test 880578	000880000578		172.18.0.64																																																																																											
SEP000880000076	SEP000880000076	880076	test 880076	000880000076		172.18.0.64																																																																																											
<b>Administration</b> DECT Download Upload Diagnostics Reset																																																																																																	

- 2 Click **New**.

An **Edit User** dialog box appears.

**Figure 104** Adm. Page: Edit User dialog box

The screenshot shows a web browser window titled "http://172.18.2.100 - Edit User - Microsoft Internet Explorer". The main content area is a dialog box with the following fields:

- Long Name:
- Name:
- Number:
- Password:
- Display Text:
- IPEI:
- Auth. Code:

At the bottom of the dialog box are three buttons: **OK**, **Cancel**, and **Apply**.

**3** In the **Long Name** field, type any name. It is recommended to type the same information as in the **Name** field (see step 4 below).

**4** In the **Name** field, type **SEP** followed by the IPEI number of the handset.

The IPEI number is found either on a label under the battery, on the packaging label, or by pressing \*99984\*✓/OK on the handset to be registered. The serial number consists of a five-digit handset type (manufacturer code) and then a seven-digit handset number.

For more information about retrieving the IPEI number (serial number), refer to [“Retrieving the Serial Number of the KIRK Handset” on page 70](#)

For more general information about the IPEI number (serial number), refer to [“Registering KIRK Handsets” on page 155](#).

**5** In the **Number** field, type the H323 registration number.

**6** In the **Display Text** field, type a standby text (max. 36 characters) to be displayed when the handset is on hook.

**7** In the **IPEI** field, type the IPEI number of the handset.

**8** In the **Auth. Code** field, type the authentication code (AC)(optional).

The authentication code is a subscription password of a maximum eight digits, defined by the technicians, and can be used when connecting the handset to the KIRK Wireless Server 600v3. The authentication code is a subscription pin code for the individual handset.

**9** Click **Apply**.

**10** Repeat step 1 to 9 for each new handset to be registered to the system.

**11** Click **OK** to save the registration(s).

In the **DECT/Users** page the new handset/user now has the status **Pending**, meaning that it is ready for subscription.

### 8.1.3 Registering Handsets Using SIP Protocol

- 1 Under **Administration** menu, click **DECT**, and then click **Users**.  
The following window appears.

**Figure 105** Adm. Page: Administration/DECT/Users page

#### KIRK Wireless Server 600/3

Configuration		Statistics	Users	Unknown	Radios	Master Calls
General		<input type="text"/> show new				
IP						
ETH0						
ETH1						
LDAP						
DECT						
Administration						
DECT						
Download						
Upload						
Diagnostics						
Reset						
Long Name	Name	No	Display	IPEI	AC	Registration
SEP000880000255	SEP000880000255	880255	test 880255	000880000255	172.18.0.64	
SEP000770759055	SEP000770759055	18062	18062	000770759055	172.18.0.64	
SEP000880000425	SEP000880000425	880425	test 880425	000880000425	172.18.0.64	
SEP000880000290	SEP000880000290	880290	test 880290	000880000290	172.18.0.64	
SEP000880000314	SEP000880000314	880314	test 880314	000880000314	172.18.0.64	
SEP000880000451	SEP000880000451	880451	test 880451	000880000451	172.18.0.64	
SEP000770751864	SEP000770751864	18023	18023	000770751864	172.18.0.64	
SEP000880000525	SEP000880000525	880525	test 880525	000880000525	172.18.0.64	
SEP000880000272	SEP000880000272	880272	test 880272	000880000272	172.18.0.64	
SEP000880000319	SEP000880000319	880319	test 880319	000880000319	172.18.0.64	
SEP000880000578	SEP000880000578	880578	test 880578	000880000578	172.18.0.64	
SEP000880000076	SEP000880000076	880076	test 880076	000880000076	172.18.0.64	

- 2 Click **New**.

An **Edit User** dialog box appears.

**Figure 106** Adm. Page: Edit User dialog box

http://172.18.2.100 - Edit User - Microsoft Internet Explorer

Long Name

Name

Number

Password

Display Text

IPEI

Auth. Code

OK Cancel Apply

Done Internet



- 3 In the **Long Name** field, type any name.
- 4 In the **Name** field, type the SIP registration name (no spaces allowed).
- 5 In the **Number** field, type the SIP registration number.

**Note:** If the SIP registration procedure requires a user name instead of the SIP registration number, you must access a hidden menu, by typing the following in the web browsers **Address bar:**<http://xxx.xxx.xxx.xxx/SIP/mod cmd.xml?xsl=sip.xml> (x is the IP address of the system) and then press **ENTER**. In the appearing dialog box, select the **Use name as username for authorization** check box, and then click **OK**.

- 6 In the **Password** field, type the SIP registration password.
- 7 In the **Display Text** field, type a standby text (max. 36 characters) to be displayed when the handset is on hook.
- 8 In the **IPEI** field, type the IPEI number of the handset.
- 9 Click **Apply**.
- 10 Repeat step 1 to 9 for each new handset to be registered to the system.
- 11 Click **OK** to save the registration(s).

In the **DECT/Users** page the new handset/user now has the status **Pending**, meaning that it is ready for subscription.

## 8.2 Subscribing KIRK Handsets

This section provides information about:

- [“Subscribing Handsets” on page 162](#)
- [“Subscribing a Handset to Different Systems” on page 163](#)

**Note:** Subscription of handsets requires the use of each registered handset.

**Note:** To make subscriptions, the system must allow subscriptions to be made. Some systems also require an Authentication Code (AC). If more than one system currently permits subscription, you will need to know the ID of the system (ARI code) to which you wish to subscribe. Authentication Codes and system ID's (ARI codes) will be provided by the system administrator.

Before subscribing handsets you need to ensure:

- that handset battery has been charged ([“Charging Battery” on page 68](#)). Low battery could cause subscription problems.
- that the handsets have been registered to the system ([“Registering KIRK Handsets” on page 155](#)).

### 8.2.1 Subscribing Handsets

- 1 Press **MENU** - go to **MENU LOGIN**.
- 2 Press **✓/OK** - go to **SUBSCRIPTION CREATE** to subscribe to a system.
- 3 Press **✓**. The handset searches for the serial number of the system.
- 4 Use the **< >** keys to scroll between the IDs systems if there is more than one system available.

During subscription, the handset searches for free positions and performs subscription on the first free position.

- 5 As soon as the correct serial number of the system appears in the display, press **✓**. The serial number is located on the label on the rear of the KIRK Wireless Server 600v3.
- 6 Enter the AC (if required) using the keyboard, and press **✓**.

An antenna symbol appears on the display to indicate a successful subscription. If not, the subscription has failed and the procedure must be retried.

## 8.2.2 Subscribing a Handset to Different Systems

The handset can be subscribed (connected) to a maximum of 10 different systems.

**Note:** To be able to log on to a system, subscription to the system must be established.

### 8.2.2.1 Changing to another System Automatically

**Note:** Auto login should only be used when systems are separate, with no overlaps.

- 1 Press **MENU** - go to **MENU LOGIN**.
- 2 Press ✓ - go to **SELECT LOGIN**.
- 3 Press ✓ - go to **SELECT LOGIN AUTO**.

The handset automatically selects a system.

The selected system is marked with an **A**.

### 8.2.2.2 Changing to another System Manually

If you would like to change to another system:

- 1 Press **MENU** - go to **MENU LOGIN**.
- 2 Press ✓ - go to **SELECT LOGIN** to subscribe to a system.  
The actual chosen system is marked with an \* or an **A** (if auto login is selected).
- 3 Press ✓ - use the < > keys to scroll between the IDs of the different systems to find the system to which you want to connect.  
Under **SELECT LOGIN** only subscriptions display. Free positions do not display.
- 4 Press ✓ to confirm.



## Chapter 9 KIRK Handset Management

This section provides information about KIRK Handset management such as unsubscribing and deregistering handsets, changing user configurations and handset adjustment. The section also provides information about activating pre call services on your handset specific for the Cisco call handler.

This section includes information about:

- “Viewing Handset/User Configuration” on page 165
- “Searching for Handset/User Information” on page 166
- “Unsubscribing KIRK Handsets” on page 166
- “Removing KIRK Handsets from the List (Deregistering)” on page 167
- “Changing User Configurations” on page 169
- “Adjusting the KIRK Handset” on page 170

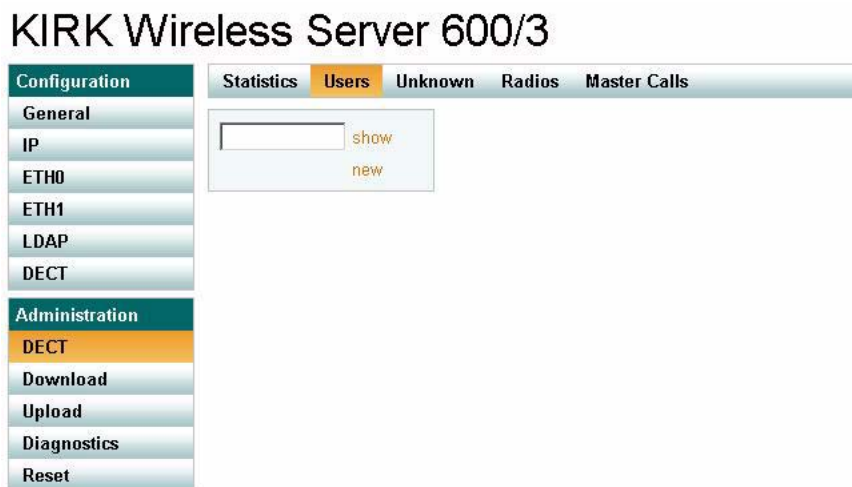
### 9.1 Viewing Handset/User Configuration

Through the web based Administration Page, it is possible to view all the user configurations of the wireless system.

For more information about accessing the Administration Page, refer to “Accessing the Web Based Administration Page” on page 75.

- 1 Under the **Administration** menu, click **DECT**, and then click **Users**.

**Figure 107** Adm. Page: Administration/DECT/Users page



- 2 Click **Show** to display all registered users and their configuration on the KIRK Wireless Server 600v3.

## 9.2 Searching for Handset/User Information

Through the web based Administration Page, it is possible to search for a registered handset/user in the system.

For more information about accessing the Administration Page, refer to [“Accessing the Web Based Administration Page”](#) on page 75.

- 1 Under the **Administration** menu, click **DECT**, and then click **Users**.

**Figure 108** Adm. Page: Administration/DECT/Users page



- 2 Type the beginning of a number or name to search for in the text field, and then click **Show**.

## 9.3 Unsubscribing KIRK Handsets

**Note:** Unsubscription of KIRK Handsets requires the use of each handset to be unsubscribed from the system.

**Note:** Removing a subscription requires a password. Password default is: 0000.

To unsubscribe a handset:

- 1 Press **MENU** ( ≡ ).
- 2 Press < - go to **MENU LOGIN**.
- 3 Press ✓/OK.
- 4 Press < - go to **SUBSCRIPTION REMOVE**.
- 5 Press ✓/OK.
- 6 Enter password (0000).

- 7 Press ✓/OK.
- 8 If handset is subscribed to more than one system, select the system ARI in question.  
The handset has been unsubscribed.

## 9.4 Removing KIRK Handsets from the List (Deregistering)

You can deregister KIRK Handsets from KIRK Wireless Server 600v3. This is necessary when:

- you must replace the handset due to loss or breakage.
- you want to assign the handset to a user with a different telephone number.

For more information about accessing the Administration Page, refer to [“Accessing the Web Based Administration Page” on page 75](#).

- 1 Under the **Administration** menu, click **DECT**, and then click **Users**.

**Figure 109** Adm. Page: Administration/DECT/Users page

### KIRK Wireless Server 600/3

Configuration	Statistics	Users	Unknown	Radios	Master Calls
<b>General</b>	<div style="display: flex; align-items: center;"> <input type="text"/> <span style="margin-left: 5px;">show</span> </div> <div style="display: flex; align-items: center;"> <input type="text"/> <span style="margin-left: 5px;">new</span> </div>				
IP					
ETH0					
ETH1					
LDAP					
DECT					
<b>Administration</b>					
DECT					
Download					
Upload					
Diagnostics					
Reset					
	<b>Long Name</b>	<b>Name</b>	<b>No</b>	<b>Display</b>	<b>IPEI</b> <b>AC</b> <b>Registration</b>
	SEP000880000255	SEP000880000255	880255	test 880255	000880000255    172.18.0.64
	SEP000770759055	SEP000770759055	18062	18062	000770759055    172.18.0.64
	SEP000880000425	SEP000880000425	880425	test 880425	000880000425    172.18.0.64
	SEP000880000290	SEP000880000290	880290	test 880290	000880000290    172.18.0.64
	SEP000880000314	SEP000880000314	880314	test 880314	000880000314    172.18.0.64
	SEP000880000451	SEP000880000451	880451	test 880451	000880000451    172.18.0.64
	SEP000770751864	SEP000770751864	18023	18023	000770751864    172.18.0.64
	SEP000880000525	SEP000880000525	880525	test 880525	000880000525    172.18.0.64
	SEP000880000272	SEP000880000272	880272	test 880272	000880000272    172.18.0.64
	SEP000880000319	SEP000880000319	880319	test 880319	000880000319    172.18.0.64
	SEP000880000578	SEP000880000578	880578	test 880578	000880000578    172.18.0.64
	SEP000880000076	SEP000880000076	880076	test 880076	000880000076    172.18.0.64

- 2 Select the handset in question by clicking on the **Long Name**.  
An **Edit User** dialog box appears.

**Figure 110** Adm. Page: Edit User dialog box

The screenshot shows a web browser window titled "http://172.18.2.100 - Edit User - Microsoft Internet Explorer". The main content area is a form with the following fields and values:

Long Name	SEP000770388874
Name	SEP000770388874
Number	
Password	
Display Text	1234
IPEI	000770388874
Auth. Code	

At the bottom of the form are four buttons: OK, Cancel, Apply, and Delete. The browser's status bar at the bottom shows "Done" and "Internet".

- 3 Click Delete.



## 9.5 Changing User Configurations

You can change user configurations, such as the AC (authentication code) using the web based Administration Page.

For more information about accessing the Administration Page, refer to [“Accessing the Web Based Administration Page” on page 75.](#)

- 1 Under the **Administration** menu, click **DECT**, and then click **Users**.

**Figure 111** Adm. Page: Administration/DECT/Users window

### KIRK Wireless Server 600/3

Configuration	Statistics	Users	Unknown	Radios	Master Calls		
General	<input type="text"/> show new						
IP							
ETH0							
ETH1							
LDAP							
DECT							
Administration							
DECT							
Download							
Upload							
Diagnostics							
Reset							
	Long Name	Name	No	Display	IPEI	AC	Registration
	SEP000880000255	SEP000880000255	880255	test 880255	000880000255	172.18.0.64	
	SEP000770759055	SEP000770759055	18062	18062	000770759055	172.18.0.64	
	SEP000880000425	SEP000880000425	880425	test 880425	000880000425	172.18.0.64	
	SEP000880000290	SEP000880000290	880290	test 880290	000880000290	172.18.0.64	
	SEP000880000314	SEP000880000314	880314	test 880314	000880000314	172.18.0.64	
	SEP000880000451	SEP000880000451	880451	test 880451	000880000451	172.18.0.64	
	SEP000770751864	SEP000770751864	18023	18023	000770751864	172.18.0.64	
	SEP000880000525	SEP000880000525	880525	test 880525	000880000525	172.18.0.64	
	SEP000880000272	SEP000880000272	880272	test 880272	000880000272	172.18.0.64	
	SEP000880000319	SEP000880000319	880319	test 880319	000880000319	172.18.0.64	
	SEP000880000578	SEP000880000578	880578	test 880578	000880000578	172.18.0.64	
	SEP000880000076	SEP000880000076	880076	test 880076	000880000076	172.18.0.64	

- 2 Select the handset in question by clicking on the **Long Name**.

An **Edit User** dialog box appears.

**Figure 112** Adm. Page: Edit User dialog box

Long Name:

Name:

Number:

Password:

Display Text:

IPEI:

Auth. Code:

OK Cancel Apply Delete

- 3 Change settings, and then click **Apply**.
- 4 Click **OK**.

## 9.6 Adjusting the KIRK Handset

This section provides information about:

- “Content of the KIRK Programming Kit Handset” on page 170
- “Set up of the Hardware for KIRK Handset Adjustment” on page 171
- “Adjusting the KIRK Handset with the ServiceTool” on page 171

### 9.6.1 Content of the KIRK Programming Kit Handset

The KIRK Programming Kit Handset (Part no. 02319509) for KIRK 3040 consists of:

- serial cable
- programming stand
- 220V power supply

The KIRK Programming Kit Handset (Part no. 02319542) for KIRK 40XX (see illustration below) consists of:

- serial cable
- splitter

**Figure 113** KIRK Programming Kit Handset



**Note:** For handset adjustment of KIRK 40XX you use the charger accompanying the handset.

**Note:** For handset adjustment you also need the programming software (ServiceTool). The ServiceTool is not part of the KIRK Programming Kit Handset but can be downloaded from [www.kirktelecom.com](http://www.kirktelecom.com).

## 9.6.2 Set up of the Hardware for KIRK Handset Adjustment

- 1 Connect the serial cable to the programming stand/charger and Com port of your computer.
- 2 Place the handset in the charger.

The handset is now ready for programming via the ServiceTool

## 9.6.3 Adjusting the KIRK Handset with the ServiceTool

The ServiceTool is the tool you access from your desktop and use for repeater programming, handset adjustment and software download to the KIRK Handset and KIRK Repeater.

For more information about adjusting the KIRK Handset with the ServiceTool, refer to the Help File in the ServiceTool. The ServiceTool is to be downloaded from [www.kirktelecom.com](http://www.kirktelecom.com).

## 9.7 Pre Call Services in Cisco Call Handler

This section describes how to activate different pre call services on your handset, when operating on a Cisco call handler.



This section provides information about:

- [“Activating Call-Forward-All” on page 171](#)
- [“Cancelling Call-Forward-All” on page 172](#)
- [“Call Pickup” on page 172](#)

### 9.7.1 Activating Call-Forward-All

Use this feature to send all calls from one telephone number to another telephone number.


On your handset do the following:

- 1 Press .
- 2 Press \*\* and then press 1. You will receive a confirmation tone.
- 3 Dial the telephone number to which you want to send the call. You will receive a confirmation tone.
- 4 Press  again to end the call.

### 9.7.2 Cancelling Call-Forward-All

Use this feature to cancel the call forward between telephone numbers.

On your handset do the following:


- 1 Press .
- 2 Press \*\* and then press 2. You will receive a confirmation tone.

### 9.7.3 Call Pickup

Use this feature to answer a phone in your call pickup group.

**Note:** Not supported for SRST.

On your handset do the following:

- 1 Press .
- 2 Press \*\* and then press 3.

**Note:** Cisco charges users of the CallManager software a license fee for each IP Phone, soft phone or other endpoint system (“IP Phone”) that connects into the Cisco CallManager software. This CallManager user license fee applies regardless of the source (Cisco, Licensee or a third party) or the functionality of that IP phone. Licensee must communicate to Licensee’s field, channels and customers, in a form and manner approved in advance by Cisco, the following information about the program: How to make payment of that CallManager User License Fee under a particular part ID number. (URL to be provided to Licensee by Cisco or customers may contact their Cisco Field representative to make payment).

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## Chapter 10 System Management

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This section provides you with information about the web based Administration Page of the KIRK Wireless Server 600v3 and ServiceTool. The section describes how the programs are used for system management.

This section includes information about:

- [“Using the Web Based Administration Page” on page 173](#)
- [“Using the ServiceTool” on page 192](#)

### 10.1 Using the Web Based Administration Page

For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page” on page 75](#).

Through the web based Administration Page of the KIRK Wireless Server 600v3 it is possible to define and view different settings of the system, reading statistics, making a backup of configuration file, updating system software, and resetting the system.

This section includes information about:

- [“Reading System Information” on page 174](#)
- [“Reading DECT Statistics” on page 175](#)
- [“Reading LDAP Server Status” on page 179](#)
- [“Reading LDAP Replicator Statistics” on page 179](#)
- [“Reading Ethernet Statistics” on page 180](#)
- [“Diagnostics” on page 181](#)
- [“Making a Back-Up of the Configuration File” on page 184](#)
- [“Updating the KIRK Wireless Server 600v3” on page 185](#)
- [“Resetting the KIRK Wireless Server 600v3” on page 189](#)

### 10.1.1 Reading System Information

This page provides general system information.

- 1 Under the **Configuration** menu, click **General**.

**Figure 114** Adm. Page: Configuration/General/Info page

## KIRK Wireless Server 600/3

Configuration	Info	Admin	License	Update	NTP	HTTP Server	HTTP Client	Logging	SNMP	Telnet
<b>General</b>										
IP										
ETH0										
ETH1										
LDAP										
DECT										
<b>Administration</b>										
DECT										
Download										
Upload										
Diagnostics										
Reset										
	<b>Version</b> 6.00 dvl IP1200[06-60319], Bootcode[365], HW[7] 8192/16384 <b>SerialNo</b> 00-90-33-0f03-10 <b>Coder</b> 12 Channels of G.711,G.726,G.729,G.723 <b>SNTP Server</b> 0.0.0.0 <b>Time</b> **:**:**:** <b>Uptime</b> 0d 0h 46m 17s DECT <b>Firmware</b> 14125500 PCS04Ap <b>System ARI</b> 000046507424 <b>Frequency</b> DECT 1.8GHz									

On the General/Info page you can read information about:

- the used firmware, boot code and hard ware
- Serial number; Mac Address of the system
- Coder
- SNTP Server; from which IP address the system receives its time information
- Time; time information - if a time server is valid
- Uptime; information about uptime since last restart
- Firmware (only displayed if radio is active)
- System ARI; ARI code of the system (only displayed if radio is active)
- Frequency

## 10.1.2 Reading DECT Statistics

In the **DECT** menu, under **Administration**, it is possible to read information about calls, users, radio calls, and handovers in the system. You get an over all overview of how the system is running.

**Note:** The pages in the **DECT** menu varies, depending on the installation (single-celle/multi-cell) and role of the KIRK Wireless Server 600v3 (Master/Secondary/LDAP Server).

This section provides information about:

- [“Statistics” on page 175](#)
- [“Users” on page 176](#)
- [“Unknown” on page 176](#)
- [“Radios” on page 177](#)
- [“Master Calls” on page 177](#)
- [“Radio Calls” on page 178](#)
- [“Handovers” on page 178](#)

### 10.1.2.1 Statistics

This page is usefull to get statistic information from the KIRK Wireless Server 600v3 about all the incoming and outgoing calls on the system and handover information.

- 1 Under the **Administration** menu, click **DECT**.

**Figure 115** Adm. Page: Administration/DECT/Statistics page

**KIRK Wireless Server 600/3**

Configuration	Statistics	Users	Unknown	Radios	Master Calls	Radio Calls	Handover
<b>General</b>	Master						
IP	Calls In		0				
ETH0	Calls In Delivered		0				
ETH1	Calls Out		0				
LDAP	Handover		0				
DECT	Handover Failed		0				
	Abnormal Call Release		0				
<b>Administration</b>	Radio						
DECT	Calls In	0					
Download	Calls Out	0					
Upload	Handover	0					
Diagnostics	Handover Failed	0					
Reset	Since 0d 0h 0m 32s						
	<input type="button" value="Clear"/>						

- 2 Click **Clear** if you want to delete all statistic information.

### 10.1.2.2 Users

This page provides information about the handsets/users registered on the system.

- 1 Under the **Administration** menu, click **DECT**, and then click **Users**.

**Figure 116** Adm. Page: Administration/DECT/Users page



- 2 Click **Show**.

### 10.1.2.3 Unknown

This page provides information about anonymous registered handsets/users on the system.

- 1 Under the **Administration** menu, click **DECT**, and then click **Unknown**.

**Figure 117** Adm. Page: Administration/DECT/Unknown page





### 10.1.2.4 Radios

This page provides information about all KIRK Wireless Server 600v3 secondaries in the KIRK Wireless Server 600v3 installation.

- Under the **Administration** menu, click **DECT**, and then click **Radios**.

**Figure 118** Adm. Page: Administration/DECT/Radios page

## KIRK Wireless Server 600/3

Configuration	Statistics	Users	Unknown	Radios	Master Calls					
<b>General</b>	<b>Name</b>	<b>Id</b>	<b>Addr</b>	<b>Sync</b>	<b>Lost</b>	<b>LDAP</b>	<b>Busy</b>	<b>Product</b>	<b>Version</b>	<b>Uptime</b>
IP	IP1200-0f00-7e 10	172.18.2.110	1	6	(0,2)	Up	0	KIRK Wireless Server 600/3	6.00 dvl [06-60319]	0d 18h 32m 18s
ETH0	IP1200-0f00-97 4	172.18.2.104	Master			Up	0	KIRK Wireless Server 600/3	6.00 dvl [06-60319]	3d 2h 6m 55s
ETH1	IP1200-0f01-60 9	172.18.2.109	4	14	(3238,0)	Up	0	KIRK Wireless Server 600/3	6.00 dvl [06-60319]	3d 2h 6m 56s
LDAP	IP1200-0f01-70 14	172.18.2.114	4	4	(0,1)	Up	0	KIRK Wireless Server 600/3	6.00 dvl [06-60319]	3d 2h 6m 56s
DECT	IP1200-0f01-8d 12	172.18.2.112	1	10	(159576,2)	Up	0	KIRK Wireless Server 600/3	6.00 dvl [06-60319]	2d 11h 4m 58s
<b>Administration</b>	IP1200-0f01-8f 8	172.18.2.108	3	9	(8764,0)	Up	0	KIRK Wireless Server 600/3	6.00 dvl [06-60319]	3d 2h 6m 56s
<b>DECT</b>	IP1200-0f01-91 5	172.18.2.105	6	1	(1,0)	Up	0	KIRK Wireless Server 600/3	6.00 dvl [06-60319]	3d 2h 6m 56s
	IP1200-0f01-9b 6	del								
<b>Download</b>	IP1200-0f03-34 3	172.18.2.103	4	14	(17122,0)	Up	0	KIRK Wireless Server 600/3	6.00 dvl [06-60319]	3d 2h 6m 56s
<b>Upload</b>	IP1200-0f03-37 13	172.18.2.113	12	137	(43008,3)	Up	0	KIRK Wireless Server 600/3	6.00 dvl [06-60319]	3d 2h 6m 56s
<b>Diagnostics</b>	IP1200-0f04-9c 1	172.18.2.101	3	6	(0,0)	Up	0	KIRK Wireless Server 600/3	6.00 dvl [06-60319]	3d 2h 6m 56s
<b>Reset</b>										

### 10.1.2.5 Master Calls

This page provides information about all calls on the Master (Primary) KIRK Wireless Server 600v3.

- Under the **Administration** menu, click **DECT**, and then click **Master Calls**.

**Figure 119** Adm. Page: Administration/DECT/Master Calls page

## KIRK Wireless Server 600/3

Configuration	Statistics	Users	Unknown	Radios	Master Calls	Radio Calls	Handover
<b>General</b>							
IP							
ETH0							
ETH1							
LDAP							
DECT							
<b>Administration</b>							
<b>DECT</b>							
<b>Download</b>							
<b>Upload</b>							
<b>Diagnostics</b>							
<b>Reset</b>							

show  
new

### 10.1.2.6 Radio Calls

This page provides information about the IPEI number and status, and to which IP address the handset will make a handover.

- 1 Under the **Administration** menu, click **DECT**, and then click **Radio Calls**.

**Figure 120** Adm. Page: Administration/DECT/Radio Calls page

## KIRK Wireless Server 600/3

Configuration	Statistics	Radio Calls	Handover
<b>General</b>	<b>DECT</b>	<b>Master</b>	<b>Handover</b>
IP	000770359605 > >	Connected 2659	172.18.2.113
ETH0	000770751867 > >	Alerting 2437	172.18.2.110
ETH1			
LDAP			
DECT			
Administration			
<b>DECT</b>			
Download			
Upload			
Diagnostics			
Reset			

### 10.1.2.7 Handovers

This page provides information about the handsets being in handover status.

- 1 Under the **Administration** menu, click **DECT**, and then click **Handover**.

**Figure 121** Adm. Page: Administration/DECT/Handover page

## KIRK Wireless Server 600/3

Configuration	Statistics	Radio Calls	Handover
<b>General</b>	000770359605		
IP			
ETH0			
ETH1			
LDAP			
DECT			
Administration			
<b>DECT</b>			
Download			
Upload			
Diagnostics			
Reset			

### 10.1.3 Reading LDAP Server Status

This page provides information about the amount of replication clients connected to the LDAP Server.

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Server-Status**.

**Figure 122** Adm. Page: Configuration/LDAP/Server-Status page

#### KIRK Wireless Server 600/3

Configuration	Server	Server-Status	Replicator	Replicator-Status
<b>General</b>				
IP				
ETH0				
ETH1				
<b>LDAP</b>				
DECT				
<b>Administration</b>				
DECT				
Download				
Upload				
Diagnostics				
Reset				
	connections	10		
	write connections	10		
	rx search	10781		
	rx modify	0		
	rx add	0		
	rx del	0		
	rx abandon	0		
	tx notify	50		
	tx error	0		
	tx error 49	0	(Invalid Credentials)	
	tx error 50	0	(Insufficient Access Rights)	

### 10.1.4 Reading LDAP Replicator Statistics

This page provides information about the selected server.

- 1 Under the **Configuration** menu, click **LDAP**, and then click **Replicator-Status**.

**Figure 123** Adm. Page: Configuration/LDAP/Replicator-Status page

#### KIRK Wireless Server 600/3

Configuration	Server	Server-Status	Replicator	Replicator-Status
<b>General</b>				
IP				
ETH0				
ETH1				
<b>LDAP</b>				
DECT				
<b>Administration</b>				
DECT				
Download				
Upload				
Diagnostics				
Reset				
	Server	172.18.2.100:389		
	Full Replication	Up		
	remote	Completed		
	notify	5		
	modify	0		
	local	Completed		
	notify	0		
	add	0		
	del	0		
	modify	5		
	pending	0		
	29.09.06 06:57:53	connecting ip=172.18.2.100:389		
	29.09.06 06:57:39	disconnected ip=172.18.2.100:389		
	29.09.06 06:56:59	connecting ip=172.18.2.100:389		
	0	Starting		

## 10.1.5 Reading Ethernet Statistics

This page provides status information on the interface.

- 1 Under the **Configuration** menu, click **ETH0/ETH1**, and then click **Statistics**.

**Figure 124** Adm. Page: Configuration/ETH/Statistics page

### KIRK Wireless Server 600/3

Configuration	Link	DHCP	IP	NAT	VLAN	DHCP Server	DHCP Leases	Statistics
<b>General</b>	tx-good		18925169					
<b>IP</b>	tx-unicast		18900106					
<b>ETH0</b>	tx-broadcast		25063					
<b>ETH1</b>	tx-multicast		0					
<b>LDAP</b>	tx-lostcarrier		0					
<b>DECT</b>	tx-deferred		0					
	tx-collision		0					
<b>Administration</b>	tx-excesscol		0					
<b>DECT</b>	tx-latecol		0					
<b>Download</b>	rx-good		25737763					
<b>Upload</b>	rx-unicast		23272897					
<b>Diagnostics</b>	rx-broadcast		2246942					
<b>Reset</b>	rx-multicast		217924					
	rx-crc-err		0					
	rx-align-err		0					
	rx-too-short		0					
	rx-too-long		0					
	rx-collision		0					
	rx-overflow-err		0					
	rx-queue-overflow		0					
	rx-no-buffer		0					
	rx-tx-64		5457348					
	rx-tx-64-127		4730947					
	rx-tx-128-255		34103834					
	rx-tx-256-511		252026					
	rx-tx-512-1023		112742					
	rx-tx-1024		6035					
	<input type="button" value="Clear"/>							

- 2 Click **Clear** if you want to delete all information.

## 10.1.6 Diagnostics

In the **Diagnostics** menu, under **Administration**, it is possible to define which logs are to be generated. The logs are useful when supervising the system and in case of problem solving.

This section provides information about:

- “Logging” on page 181
- “Tracing” on page 182
- “Config Show” on page 183
- “Ping” on page 183

### 10.1.6.1 Logging

- 1 Under the **Administration** menu, click **Diagnostics**.

**Figure 125** Adm. Page: Administration/Diagnostics/Logging page



- 2 Select which information you want to log.
  - **TCP:** Logs generated upon TCP connection setups in the H.225/H.245 protocol
  - **DECT Master:** Logs generated by the master software in the KIRK Wireless Server 600v3
  - **DECT Radio:** Logs generated by the radio software in the KIRK Wireless Server 600v3
  - **H.323 Registrations:** Logs generated upon RAS registration
  - **SIP Registrations:** Logs generated upon SIP user registration
  - **Config Changes:** Logs generated upon configuration changes in the KIRK Wireless Server 600v3
- 3 Click **OK**.
- 4 Click **Syslog** to view the logs.

### 10.1.6.2 Tracing

In this page you can define what information to trace. This information is useful when troubleshooting and when contacting service representatives.

- 1 Under the **Administration** menu, click **Diagnostics**, and then click **Tracing**.

**Figure 126** Adm. Page: Administration/Diagnostics/Tracing page

## KIRK Wireless Server 600/3

Configuration	Logging	Tracing	Config Show	Ping
<b>General</b>				
IP				
ETH0				
ETH1				
LDAP				
DECT				
<b>Administration</b>				
DECT				
Download				
Upload				
<b>Diagnostics</b>				
Reset				

DECT	VOIP	IP
System <input type="checkbox"/>	H.323/RAS <input type="checkbox"/>	PPP <input type="checkbox"/>
Master <input checked="" type="checkbox"/>	H.323/H.225 <input type="checkbox"/>	PPTP <input type="checkbox"/>
Radio <input checked="" type="checkbox"/>	H.323/H.245 <input type="checkbox"/>	PPPoE/0 <input type="checkbox"/>
	SIP/Messages <input type="checkbox"/>	PPPoE/1 <input type="checkbox"/>
	SIP/Events <input type="checkbox"/>	DHCP/0 <input type="checkbox"/>
		DHCP/1 <input type="checkbox"/>
		HTTPCLIENT <input type="checkbox"/>

OK

trace(buffer) trace(continuous)

- 2 Select which information you want to trace.
- 3 Click **Trace(buffer)** if you only want to trace in a small buffer or click **Trace(continues)** if you want to trace in a large buffer.
- 4 Click **OK**.

### 10.1.6.3 Config Show

This page displays the KIRK Wireless Server 600v3 configuration as a text string.

- 1 Under the **Administration** menu, click **Diagnostics**, and then click **Config Show**.

**Figure 127** Adm. Page: Administration/Diagnostics/Config Show page

Configuration	Logging	Tracing	Config Show	Ping
General				
IP				
ETH0				
ETH1				
LDAP				
DECT				
Administration				
DECT				
Download				
Upload				
Diagnostics				
Reset				

```

vars check Off4e605b9780433501c60e8
# 6.00 dv1 IP1200[06-60319], Bootcode[365], HW[7] 8192/32768
# IP1200-0f-04-9c
#
config change CPU
config change SNMP0 /access read-only
config change LOGO /type SYSLOG /addr 172.18.1.126 /class 0
config change FLASHMAN0
config change VARS
config change SER0
config change SIF2 /led
config change NIF3
config change DECT /statusmsg-log 1 /trace
config change DECT /statusmsg-log 1 /trace
config change AC-DSP0
config change AC-DSP1
config change MEDIA-FWD
config change ETH0 /link auto
config change ETH1 /link auto /pc-link auto
config change PPPOE0
config change PPPOE1
config change PPTP
config change IPO /priority-tos 0x10
config change IPO ETH0 /addr 172.18.2.101 /mask 255.255.0.0\r\n"
config change IPO ETH1 /addr 192.168.1.1 /mask 255.255.255.0\r\n"
config change IPO PPP0 [ /name Admin-PPP /local ,admin /remote ,, ,192.168.0.253
config change IPO PPP1 /pptp-if <none>

```

### 10.1.6.4 Ping

This page is used to determine the response time from the KIRK Wireless Server 600v3 to a certain IP address. This is useful when checking the connection between the different system components.

- 1 Under the **Administration** menu, click **Diagnostics**, and then click **Ping**.

**Figure 128** Adm. Page: Administration/Diagnostics/Ping page

#### KIRK Wireless Server 600/3

Configuration	Logging	Tracing	Config Show	Ping
General				
IP				
ETH0				
ETH1				
LDAP				
DECT				
Administration				
DECT				
Download				
Upload				
Diagnostics				
Reset				

Ping

IP-address:

- 2 In the **IP address** field, type the IP address of another IP system on the network you want to check up against. The connection will be checked.

### 10.1.7 Making a Back-Up of the Configuration File

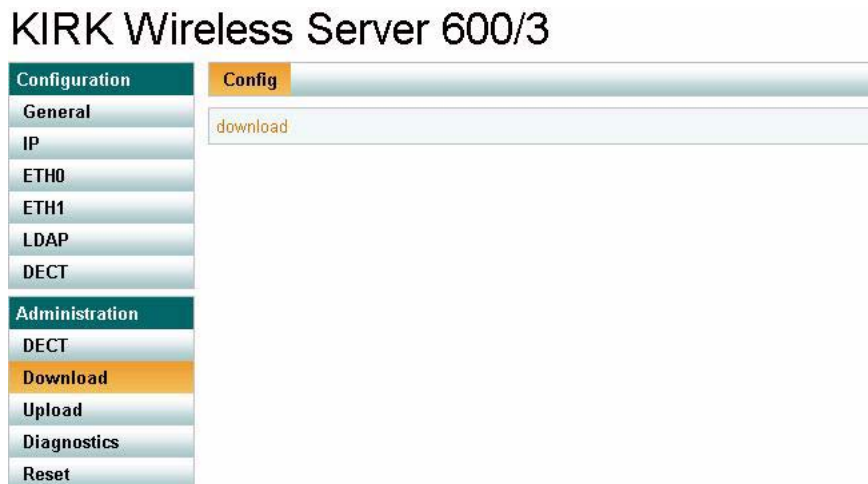
This section provides information about saving the configuration data of the KIRK Wireless Server 600v3, registration and subscription data of the handset and system information.

When saving the configuration data you have an overall overview of the KIRK Wireless Server which is useful in case of problem solving.

**Note:** Making a back up of the configuration file is also useful when configuring more KIRK Wireless Server 600v3 secondaries and an identical configuration should be applied to each KIRK Wireless Server 600v3 Secondary. For information about configuring a Secondary KIRK Wireless Server 600v3 using a back-up file, refer to [“Configuring Secondary KIRK Wireless Server 600v3 Using a Back-Up File” on page 123.](#)

- 1 Under the **Administration** menu, click **Download**.

**Figure 129** Adm. Page: Administration/Download/Config page



- 2 Click **Download**.  
A dialog box appears.
- 3 Indicate in which folder and under what name the file should be saved, and then click **Save**.



## 10.1.8 Updating the KIRK Wireless Server 600v3

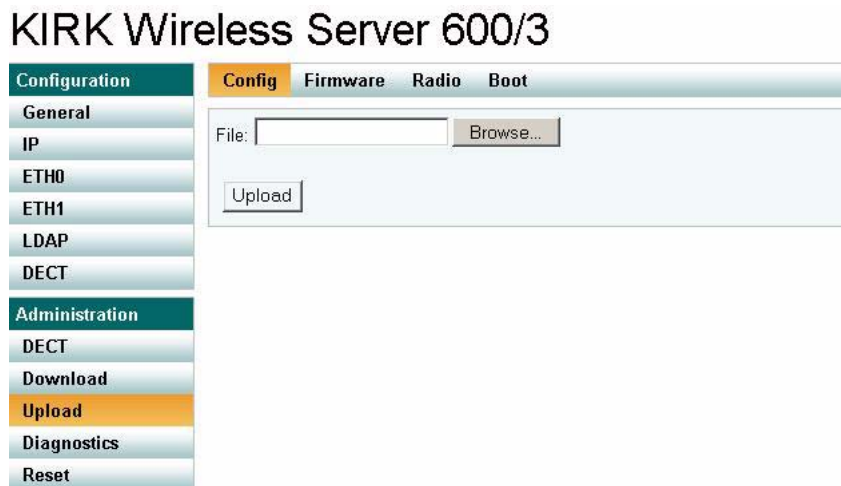
This section describes how to update the following:

- “Updating Configuration File” on page 185
- “Updating Firmware” on page 186
- “Updating Radio File” on page 187
- “Updating Boot File” on page 188

### 10.1.8.1 Updating Configuration File

- 1 Under the **Administration** menu, click **Upload**.

**Figure 130** Adm. Page: Administration/Upload/Config page



- 2 Click **Browse**.  
A dialog box appears.
- 3 Select the configuration file in question, and then click **Open**.
- 4 Click **Upload**.  
Wait until the system has finished uploading.
- 5 Click either **Reset Immediately** or **Idle Reset**.

When resetting the KIRK Wireless Server 600v3 immediately, all calls are terminated and the KIRK Wireless Server 600v3 is reset. When resetting the KIRK Wireless Server 600v3 when the system is idle, the reset is done when there are no active calls in the KIRK Wireless Server 600v3.

### 10.1.8.2 Updating Firmware

The software of the KIRK Wireless Server 600v3 can be updated. To update the software you load a file to the system. Contact your distributor for newest software.

- 1 Under the **Administration** menu, click **Upload**, and then click **Firmware**.

**Figure 131** Adm. Page: Administration/Upload/Firmware page

## KIRK Wireless Server 600/3

- 2 Click **Browse**.  
A dialog box appears.
- 3 Select the firmware in question, and then click **Open**.
- 4 Click **Upload**.

Wait until the system has finished uploading.

**Note:** Do not interrupt firmware upload. If this process is interrupted, the firmware in the KIRK Wireless Server 600v3 will be defect.

**Note:** If the firmware upload is interrupted, the firmware must be uploaded again before rebooting the system.

- 5 Click either **Reset Immediately** or **Idle Reset**.

When resetting the KIRK Wireless Server 600v3 immediately, all calls are terminated and the KIRK Wireless Server 600v3 is reset. When resetting the KIRK Wireless Server 600v3 when the system is idle, the reset is done when there are no active calls in the KIRK Wireless Server 600v3.

### 10.1.8.3 Updating Radio File

The radio file of the KIRK Wireless Server 600v3 can be updated. To update the radio file you load a file to the system. Contact your distributor for newest software.

- 1 Under the **Administration** menu, click **Upload**, and then click **Radio**.

**Figure 132** Adm. Page: Administration/Upload/Radio page



- 2 Click **Browse**.
- 3 Select the radio file in question, and then click **Open**.
- 4 Click **Send file**.

Wait until the system has finished uploading.

**Note:** When updating the radio file, all calls are terminated.

### 10.1.8.4 Updating Boot File

The boot file of the KIRK Wireless Server 600v3 can be updated. To update the boot file you load a file to the system. Contact your distributor for newest software.

- 1 Under the **Administration** menu, click **Upload**, and then click **Boot**.

**Figure 133** Adm. Page: Administration/Upload/Boot page

## KIRK Wireless Server 600/3

The screenshot shows the web interface for the KIRK Wireless Server 600/3. On the left is a navigation menu with two main sections: 'Configuration' and 'Administration'. Under 'Configuration', there are links for 'General', 'IP', 'ETH0', 'ETH1', 'LDAP', and 'DECT'. Under 'Administration', there are links for 'DECT', 'Download', 'Upload' (which is highlighted in orange), 'Diagnostics', and 'Reset'. The main content area has a sub-menu with 'Config', 'Firmware', 'Radio', and 'Boot' (which is highlighted in orange). Below this sub-menu, there is a 'Boot File:' label followed by a text input field and a 'Browse...' button. Below the input field is an 'Upload' button.

- 2 Click **Browse**.  
A dialog box appears.
- 3 Select the boot file in question, and then click **Open**.
- 4 Click **Upload**.  
Wait until the system has finished uploading.
- 5 Click either **Reset Immediately** or **Idle Reset**.

When resetting the KIRK Wireless Server 600v3 immediately, all calls are terminated and the KIRK Wireless Server 600v3 is reset. When resetting the KIRK Wireless Server 600v3 when the system is idle, the reset is done when there are no active calls in the KIRK Wireless Server 600v3.

## 10.1.9 Resetting the KIRK Wireless Server 600v3

Some configuration changes requires a reset in order to take effect. A reset restarts the KIRK Wireless Server 600v3 software.

You must restart the system after the following procedures:

- configuring
- uploading configuration data
- uploading firmware
- uploading radio files
- uploading boot files

There are three ways of resetting the system:

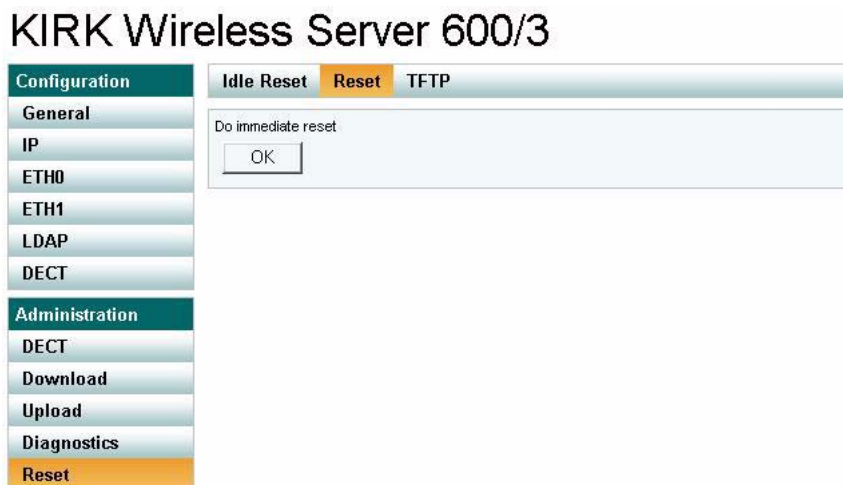
- [“Resetting KIRK Wireless Server 600v3 Immediately” on page 189](#)
- [“Resetting KIRK Wireless Server 600v3 When System is Idle” on page 190](#)
- [“Resetting in TFTP Mode” on page 191](#)

### 10.1.9.1 Resetting KIRK Wireless Server 600v3 Immediately

When resetting the KIRK Wireless Server 600v3 immediately, all calls are terminated and the KIRK Wireless Server 600v3 is reset.

- 1 Under the **Administration** menu, click **Reset**, and then click **Reset**.

**Figure 134** Adm. Page: Administration/Reset/Reset page



- 2 Click **OK** to reset the system immediately.

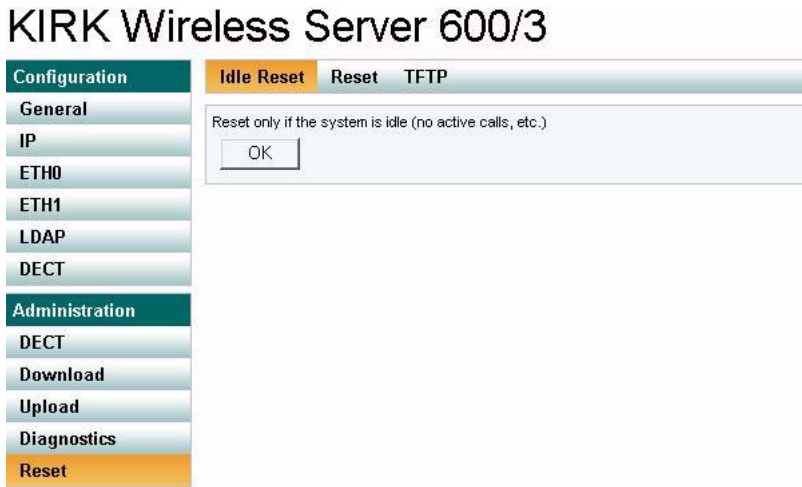
**Note:** When resetting the KIRK Wireless Server 600v3 immediately all calls are terminated.

### 10.1.9.2 Resetting KIRK Wireless Server 600v3 When System is Idle

Instead of resetting the system immediately and terminating all ongoing calls, it is also possible to reset the system, when the system is idle. The reset is done when there are no active calls in the KIRK Wireless Server 600v3.

- 1 Under the **Administration** menu, click **Reset**.

**Figure 135** Adm. Page: Administration/Reset/Idle Reset page



- 2 Click **OK** to reset if the system is idle (no active calls, etc.).

### 10.1.9.3 Resetting in TFTP Mode

You can also reset the KIRK Wireless Server 600v3 in TFTP mode (Trivial File Transfer Protocol). The TFTP mode is used, if the KIRK Wireless Server 600v3 is to be updated through the GWLOAD program. For more information about using the GWLOAD program, refer to [“Using the GWLOAD Program” on page 199](#).

- 1 Under the **Administration** menu, click **Reset**, and then click **TFTP**.

**Figure 136** Adm. Page: Administration/Reset/TFTP page

## KIRK Wireless Server 600/3

Configuration	Idle Reset	Reset	TFTP
<b>General</b>	Note: In TFTP mode the device can be reached only with the gwload utility		
IP	<input type="button" value="OK"/>		
ETH0			
ETH1			
LDAP			
DECT			
<b>Administration</b>			
DECT			
Download			
Upload			
Diagnostics			
Reset			

- 2 Click **OK**.

## 10.2 Using the ServiceTool

The ServiceTool is used for repeater programming and handset adjustment.

This section provides information about:

- [“KIRK Repeater Programming” on page 192](#)
- [“Adjusting the KIRK Handset” on page 192](#)

### 10.2.1 KIRK Repeater Programming

For information about repeater programming, refer to [“Programming the KIRK Repeater with the ServiceTool” on page 53](#).

### 10.2.2 Adjusting the KIRK Handset

For information about KIRK Handset adjustment, refer to [“Adjusting the KIRK Handset with the ServiceTool” on page 171](#).



## Chapter 11 Messaging over IP MSF

This section provides you with information about writing MSF messages (Message Service Function) using the web based Administration Page of the KIRK Wireless Server 600v3.

For information on accessing the web based Administration Page, refer to [“Accessing the Web Based Administration Page” on page 75](#).

With the MSF messages function you can send text messages to any MSF compatible handset connected to the KIRK Wireless Server 600v3.

This section includes information about:

- [“Activating MSF Messages Function” on page 193](#)
- [“Sending Text Messages” on page 194](#)

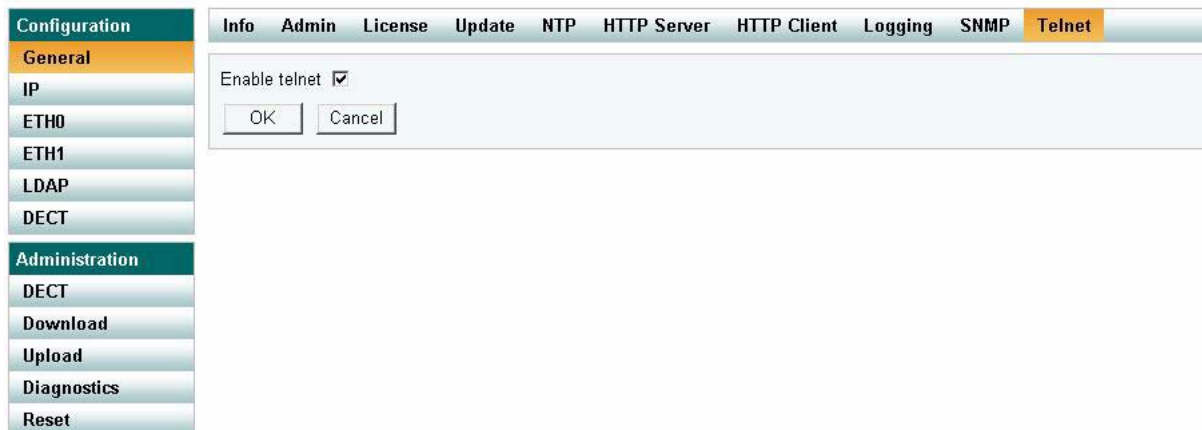
### 11.1 Activating MSF Messages Function

This section describes how to enable the MSF messages function by activating the TELNET system.

- 1 Under the **Configuration** menu, click **General**, and then click **Telnet**.

**Figure 137** Adm. Page: Configuration/General/Telnet page

#### KIRK Wireless Server 600/3



- 2 Select the **Enable Telnet** check box.
- 3 Click **OK**.

The configuration has now been changed and the TELNET system is activated, making it possible to send MSF messages.

## 11.2 Sending Text Messages

The MSF messages function requires the use of a third-party application, such as an alarm server.

For demonstration, KIRK telecom has a MSF package including:

- Binary dll
- Lan Manager program including the java source code
- Description of the dll interface
- Description of the MSF protocol
- Simple example in VB.net using the dll interface including source code

**Note:** The MSF Lan Manager is a demo program using the KIRK dll interface. The KIRK dll interface is available for free use.

For more information about obtaining the KIRK telecom MSF package, contact KIRK telecom.

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## Chapter 12 Troubleshooting

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This section provides you with general troubleshooting information, frequently asked questions, and describes how to upload IP firmware using the KIRK GWLOAD program.

This section includes information about:

- [“Solving Problems in KIRK Wireless Server 600v3” on page 195](#)
- [“Frequently Asked Questions” on page 198](#)
- [“Using the GWLOAD Program” on page 199](#)

### 12.1 Solving Problems in KIRK Wireless Server 600v3

This section describes wireless troubleshooting procedures only. It is divided between KIRK Wireless Server 600v3 problems, KIRK Repeater problems and KIRK Handset problems. However, when one component is faulty, it is important to check the other parts of the installation as well.

Following is a summary of faults that may be encountered during a wireless PBX installation and the appropriate corrective actions. It is assumed that all other parts of the KIRK Wireless Server 600v3 are in order and that the user is familiar with the standard KIRK Wireless Server 600v3 troubleshooting procedures.

This section contains information about error messages/problems in:

- [“Administration Page of the KIRK Wireless Server 600v3” on page 196](#)
- [“KIRK Configuration Tool for KIRK Wireless Server 600v3” on page 197](#)
- [“KIRK Repeater” on page 197](#)
- [“KIRK Handset” on page 197](#)

### 12.1.1 Administration Page of the KIRK Wireless Server 600v3

The error messages that may occur on the KIRK Wireless Server 600v3 Administration Page are described in the following table.

**Table 11** Error Messages on the Administration Page

Problem	Action required
<b>LDAP replication is down/ stopped</b>	The LDAP replicator is not active. Check password. Check that the Master IP address of the LDAP Server is correct. Check that the LDAP replication service is enabled.
<b>Missing Skinny license. (Skinny) not available in the Prot (Protocol) field.</b>	Obtain the Cisco Skinny licence from KIRK telecom.
<b>No Sys-Object</b>	LDAP replicator is not active. Check password. Check if LDAP replication service is enabled.
<b>No DECT firmware and System ARI code on all radio units with active radios.</b>	Check if radio firmware is missing. Check if radio is disabled
<b>Upload of firmware failed</b>	Check if you are uploading valid firmware files. Check if you are uploading radio firmware as IP firmware. Check if communication between PC and radio unit is interrupted.
<b>Password mismatch</b>	Check that the password is correct (small letters, capital letters etc.). If password has been changed, the new password must be used for the whole installation.
<b>Long name missing</b>	You need to type a long name. Using Skinny and H323 Protocol, type <b>SEP</b> followed by the IPEI number of the handset. The IPEI number is found either on a label under the battery, on the packaging label, or by pressing <b>*99984*✓/OK</b> on the handset to be registered. The serial number consists of a five-digit handset type (manufacturer code) and then a seven-digit handset number. Using SIP Protocol, type any name.
<b>Cn already exists</b>	Long name already exists.
<b>IPEI too long IPEI too short</b>	The serial number (IPEI) consists of a five-digit handset type (manufacturer code) and then a seven-digit handset number.

### 12.1.2 KIRK Configuration Tool for KIRK Wireless Server 600v3

The error messages that may occur in the KIRK Configuration Tool are described in the following table.


**Table 12** Error Messages in KIRK Configuration Tool

Problem	Action required
<b>Get button is grayed - cannot click on it</b>	The <b>Get</b> button uses the IP address to look up the host name. The <b>Get</b> button is only enabled, if the <b>DHCP</b> check box is disabled.
<b>The application fails to resolve the host name</b>	Check that you are online, and that IP address is correct and valid to the network.
<b>LDAP Server tab is not visible</b>	Check that the <b>Master is LDAP Server</b> check box in the <b>Master</b> tab is deselected.
<b>One or more Host Names not filled!</b>	When trying to save configuration files, all host names for the selected devices to be saved, must be defined. On the <b>Master</b> tab/ <b>Sync Master</b> tab, empty host name fields are marked with a red exclamation mark. On the <b>Secondaries</b> tab, look for missing host names in the <b>Host Name</b> column.

### 12.1.3 KIRK Repeater

Problem	Action required
<b>LED not on</b>	Check if repeater programming is correct.
<b>LED keeps flashing</b>	Check if repeater programming is correct.

### 12.1.4 KIRK Handset

Problem	Action required
<b>The telephone freezes</b>	Remove and replace the battery pack. Press  to turn on the telephone.
<b>The telephone does not ring</b>	Check whether the ringer is SILENT or RINGER VOL. is OFF.
<b>Not possible to turn on the telephone</b>	Check if battery is connected. If yes, charge battery.
<b>The telephone turn off when receiving a call and going off-hook</b>	Charge the battery. If still a problem change the battery as it might be defective.
<b>The telephone cannot subscribe even if system ID has been found</b>	Check if Access Code is necessary.

## 12.2 Frequently Asked Questions

This section contains frequently asked questions about the KIRK Wireless Server 600v3.

Question - General	Answer
<b>Why is my single cell system continuously restarting itself?</b>	On the Administration Page of the KIRK Wireless Server 600v3 ( <b>Configuration &gt; DECT &gt; Radio</b> ) - or in the KIRK Configuration Tool, set radio ID back to default (blank).
<b>How can I see that I am using a multi-cell license?</b>	On the Administration Page of the KIRK Wireless Server 600v3, look in <b>Configuration &gt; General &gt; Info</b> for the System ARI code. If the first three numbers in the System ARI code is <b>100</b> you are using a multi-cell license.
<b>How many channels does an internal call take?</b>	An internal call takes two channels, one for each handset.
<b>Where do I find the call statistics for my system on the Administration Page?</b>	On the Administration Page of the KIRK Wireless Server 600v3, look in <b>Administration &gt; DECT &gt; Statistics</b> for calls in, calls out, handover, and failures.
<b>Why is there no data in my call statistics on the Administration Page?</b>	Call statistics are erased with loss of power.
<b>I updated the firmware on the Master KIRK Wireless Server 600v3. Why will the KIRK Wireless Server 600v3 secondaries not sync up?</b>	Firmware updates must be uploaded to all KIRK Wireless Server 600v3. It does not sync up with the Master KIRK Wireless Server 600v3.
<b>What does the Master KIRK Wireless Server 600v3 do?</b>	The Master KIRK Wireless Server 600v3 connects the DECT system to the call handler at each site.

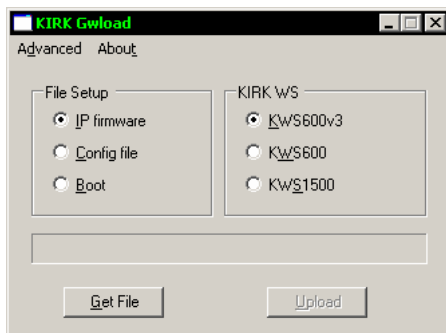
## 12.3 Using the GWLOAD Program

This section describes how to reach the KIRK Wireless Server 600v3 through the GWLOAD program. It is necessary to use the GWLOAD program if the system GW Upload is crashed and/or if KIRK Wireless Server 600v3 is restarted in TFTP mode (refer to [“Resetting the KIRK Wireless Server 600v3 Hardware”](#) on page 44 for more information). The GWLOAD program is to be downloaded from [www.kirktelecom.com](http://www.kirktelecom.com).

- 1 Once you download the GWLOAD program, install it by clicking on the **setup.exe** and by following the resulting Install Wizard prompts.
- 2 Double-click the GWLOAD icon or locate the program under the Start menu to open the GWLOAD application on your desktop.

The following dialog box appears:

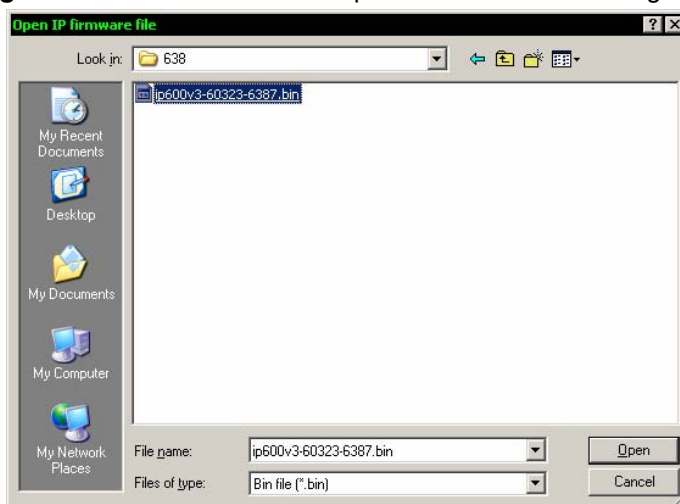
**Figure 138** KIRK GWLOAD program



- 3 In the **File Setup** area, click **IP firmware**.
- 4 In the **KIRK WS** area, click **KWA600v3**.
- 5 Click **Get File**.

An **Open IP firmware file** dialog box appears.

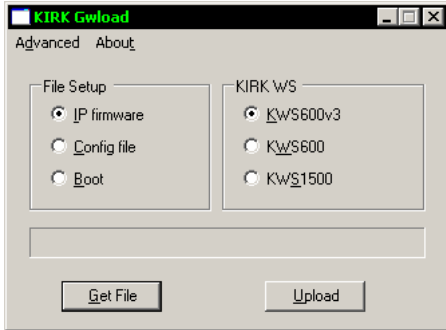
**Figure 139** KIRK GWLOAD: Open IP firmware file dialog box



- 6 Select the file in question, and then click **Open**.

The following dialog box appears.

**Figure 140** KIRK GWLOAD: Upload dialog box



- 7 Click **Upload**.

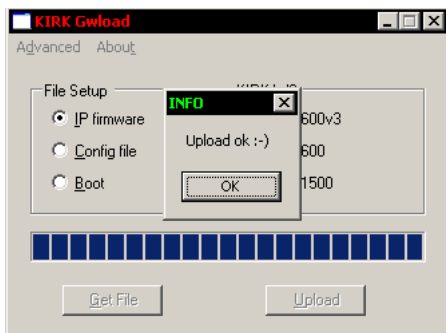
The following dialog box appears.

**Figure 141** KIRK GWLOAD: Upload in progress dialog box



- 8 When uploading has finished, the following dialog box appears.

**Figure 142** KIRK GWLOAD: Uploading finished dialog box



Click **OK**.

- 9 When finished uploading the new firmware, it is necessary to reset the KIRK Wireless Server 600v3 by pressing the Reset button (short press) on the faceplate of the KIRK Wireless Server 600v3. This will restart the KIRK Wireless Server 600v3.



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